REPORT RESUMES

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A STUDY OF THE NEED FOR A JUNIOR COLLEGE IN THE SALT LAKE METROPOLITAN AREA.

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A POPULATION INCREASE OF 71 PERCENT IS EXPECTED IN UTAH BETWEEN 1960 AND 1980. THE GREATEST GROWTH IS EXPECTED IN THE SALT LAKE METROPOLITAN AREA. THE COLLEGE AGE GROUP (18 TO 21 YEARS) WILL INCREASE BY 80 PERCENT BETWEEN 1960 AND 1970. IF CONSERVATIVE ESTIMATES ARE USED, THE PROPOSED JUNIOR COLLEGE COULD EXPECT AN ENROLLMENT OF APPROXIMATELY 2,000 STUDENTS IN THE FIRST YEAR OF OPERATION. SUBSEQUENT ENROLLMENT MAY BE AS HIGH AS 6,000 STUDENTS. SUGGESTED CURRICULAR OFFERINGS SHOULD INCLUDE UNIVERSITY-PARALLEL COURSES, REMEDIAL PROGRAMS, AND A WIDE RANGE OF OCCUPATIONAL TRAINING PROGRAMS NOT PRESENTLY OFFERED BY THE UNIVERSITY OF UTAH OR SALT LAKE TRADE TECHNICAL INSTITUTE. INFORMATION RELATING TO THE COST OF EDUCATING JUNIOR COLLEGE STUDENTS AND EXPENDITURES FOR CAPITAL OUTLAY WAS INCLUDED IN THE STUDY. THE COLLEGE PLANT WILL COST APPROXIMATELY $16 1/2 MILLION TO ENROLL 6,000 STUDENTS AT A PER STUDENT COST OF $2,750. (HS)

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The Need for a — Metropolitan Junior College

By

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UNIVERSITY OF CALIF.
LOS ANGELES

JAN 10 1967

CLEARINGHOUSE FOR
JUNIOR COLLEGE
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Submitted to the — **Coordinating Council of Higher Education**

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A STUDY OF THE NEED FOR A JUNIOR COLLEGE IN THE SALT LAKE METROPOLITAN AREA

by

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Submitted to the

UTAH COORDINATING COUNCIL OF HIGHER EDUCATION
15 North West Temple, Suite A
Salt Lake City, Utah

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CHAPTER I

THE JUNIOR COLLEGE CONCEPT

INTRODUCTION

The growth of the junior college movement, from the turn of the century to the present time, has been the most dramatic development in the history of American higher education. Since 1945 the junior college has come to be recognized as a "community college," and during this period the public community college has realized its greatest growth. Nationwide interest in the community college is evident from the number of two-year community institutions established since 1945, and in the adoption of statewide junior college systems in such states as Alabama, Arizona, California, Florida, Illinois, Michigan, Minnesota, New York, North Carolina, Washington, and Oregon.

There are several factors which have contributed to the rapid growth and development of the two-year community college. First, there is the unprecedented demand by an ever-increasing number of high school graduates for educational opportunities beyond high school. Next, the technical changes which are revolutionizing governmental, business, and industrial procedures and practices increases the demand for trained personnel with at least two years of training beyond high school. Lastly, the demands of society for the extension of educational opportunities beyond the high school is a factor of considerable importance.

Utah, like most other states, faces the serious problem of providing adequate educational opportunities beyond the high school for increasing numbers of high school graduates. The concentration and growth of Utah's population along the "Wasatch Front" focuses the problem in the Salt Lake Metropolitan Area. It is here that the state of Utah is experiencing its greatest population growth, though only providing for a limited expansion of available post-high school educational facilities.

The Utah Coordinating Council of Higher Education, in recognizing the need for increased educational opportunities beyond high school, called for a junior college study of the Salt Lake Metropolitan Area. The junior college study was designed to examine the following factors: (1) the junior college (community college) concept; (2) population changes and growth in Utah and the Salt Lake Metropolitan Area; (3) school enrollments and predictions; (4) post-high school educational opportunities in the Salt Lake area; and (5) occupational opportunities in the Salt Lake area and the available educational facilities for the preparation and training of high school graduates which may enable them to enter employment. The study also includes comparative data concerning the cost of educating students as well as capital outlay expenditures for the construction of community colleges. Finally, attention was directed to possible locations for a junior college campus in Salt Lake County.

THE JUNIOR COLLEGE CONCEPT

It is appropriate at the outset of such a study to describe the junior college concept in order that the reader may more fully understand something of the nature and the "accepted purposes" of the institution with which the study is concerned. The existing junior colleges in Utah do not exemplify the potential of a comprehensive junior college in a metropolitan area because they are relatively smaller and serve less populated regions. While the two-year institutions in Utah do perform many of the "accepted purposes" of the junior college, no one institution performs all of the functions described in the following paragraphs.

The typical junior college performs a variety of functions designed to meet the needs of individual students and the community or area in which the institution is located. The functions of the junior college today include the following: (1) occupational training; (2) transfer training; (3) adult education and community services; (4) general education; (5) guidance services; and (6) providing an opportunity for the removal of educational deficiencies.

Occupational training. An important, if not the most important curricular responsibility of the junior college is to provide occupational training in a wide variety of fields designed to prepare students for immediate employment. The nature of occupational training programs which the junior college offers is not conceived in a vacuum but rather is based on periodic occupational surveys of the community which the institution serves. On the basis of community surveys, junior colleges organize and offer a wide range of occupational programs. The following suggests the extent of occupational offerings found in junior colleges today:

Agriculture. Agri-Business, Farm Machinery, Landscape Design, Animal and Crop Production, and Nursery Practice.

Applied Arts. Advertising and Graphic Arts, Ceramics, Commercial Art and Photography, Graphics, and Technical Illustration.

Business. Accounting, Banking, Clerical, Data Processing, Insurance, Management, Real Estate, Receptionist, and Secretarial Science.

Engineering and Industrial Technology. Air Conditioning and Refrigeration Technology, Architectural Engineering Technology, Civil and Highway Engineering Technology, Computer Technology, Drafting Technology (Architectural, Design, Engineering, Industrial, Machine, and Petroleum), Electrical Power, Electronics, Industrial Technology, Mechanical and Metallurgical Technology, Plastics, and Surveying and Topographical Drafting.

Trade and Industrial. Airframe Construction, Aviation Engines, Air Conditioning and Refrigeration Manufacture, Appliance Repair, Automotive, Building Construction, Diesel Mechanics, Electrical Machinery, Farm Machinery, Machine Production, Metals, Office Machine Repair, and Radio and Television Service and Repair.

Apprenticeship Programs. Many junior colleges enroll students in evening apprenticeship programs and thereby supplement on-the-job work experience. The following are representative of the apprentice programs: Automotive, Carpentry, Electrical, Painting, Plumbing, Welding, Sheet Metal and Plastering, Concrete and Masonry.

Health Fields. Dental: Hygienist, Technician, Assistant, and Secretary; Medical: Technician, Secretary, Assistant, and Librarian; Nursing, Optical Technician, Sanitarian, and X-ray Technician.

Apparel, Culinary, and Homemaking Arts. Child Care and Nursery School, Clothing, Decorative Arts, Foods, Hotel and Restaurant Management, and Home Management.

Services. Correctional Science Supervision, Custodian--Supervision and Management, Fire Training, Police Science and Law Enforcement, Library Assistant, Cosmetology, Barbering, Journalism, and Forestry Service.

To insure that occupational training and instruction are maintained on a current basis, junior colleges organize "lay advisory" committees for the purpose of advising college officials regarding the various occupational programs offered.

The essential characteristic of occupational curricula in the junior college is flexibility. If the junior college is to meet community needs, it must offer, in addition to the regular two-year programs, short term courses of varying length. The junior college must also be prepared to offer in-service training programs for government, business, and industrial workers. In so doing, the junior college supports the community and its economic interests.

Transfer training. Through the transfer program, junior colleges offer college and university courses that parallel the lower-division offerings of the four-year institutions to which students may be expected to transfer. Upon graduation, the junior college student is prepared to enter the four-year institution with full junior-year standing. The junior college, in offering college and university parallel courses, should not undertake to duplicate all lower division offerings, but should be concerned with those courses for which there is a continued and sustained demand. It is the purpose of the junior college to offer lower-division courses which prepare the student for entrance to the college or university, but the junior college cannot and should not attempt to duplicate all lower-division courses offered by the university.

University-parallel or transfer courses offered by the junior college require the same kind of academic performance demanded by the university. The junior college, if it is to prepare students adequately for the university, can do no less than maintain and duplicate standards which the university itself maintains.

The junior college today offers a wide variety of transfer programs which lead to upper-division study in the university. Among the programs found in the junior college are the following:

> Agriculture, Architecture, Business Administration, Engineering, Forestry and Wildlife Management, Home Economics, Humanities, Industrial Arts, Journalism, Law, Librarianship, Mathematics, Medicine, Dentistry, Nursing, Pharmacy, Public Health, Veterinary Medicine, Natural Science, Social Science, and Teaching.

As is true of the occupational programs, junior colleges will develop a transfer curriculum based on the needs of its students; thus among the programs listed above the junior college will select those courses for which there is continuing demand.

Adult Education and Community Services. The junior college has assumed the responsibility of providing a wide range of courses to meet the diversified needs of adult residents. The following list suggests some adult groups in need of educational assistance:

(1) Adults who wish to complete the requirements for a high school diploma.

(2) Adults who wish to work toward the associate or baccalaureate degree, but who are unable to enroll in the regular day program.

(3) Technicians, craftsmen, and certain specialists who are affected by automation and technological change and who require retraining to qualify on new machines or need to learn new techniques.

(4) Workers, from whatever field, who wish to qualify for better positions and who must train for such advancement on a part-time basis.

(5) Business owners and managers who desire to broaden their knowledge and skills in the business management field.

(6) Adults who wish to follow cultural or avocational courses and who, by the acquisition of new knowledge, equip themselves to live a more satisfying and productive life.

(7) Homemakers and parents who need to increase their knowledge, skill, and understanding in domestic science and child development.

(8) Adults who wish to obtain a clearer understanding of international, national, and local problems, and of the significance of such problems to them.

The growth of adult education programs has exceeded the expectations of the junior college. Those junior colleges which offer a broad and varied program for adults soon come to recognize that they are serving many more adults than students regularly enrolled during the daytime. The need for adult education is apparent when it is recognized that in the United States one in every three adults (65 million) participates in education beyond the high school.

The programs which are available to adult students include a wide variety of courses in the occupational and academic areas. Again, the courses to be offered depend in large part on the needs of adult students.

In recent years, public junior colleges have accepted responsibility for providing a variety of community services. Such community services extend beyond offering programs and sponsoring events to which the public is invited. Today the public junior colleges provide a variety of services which include the following: (1) the use of college facilities by community organizations; (2) support of community projects and activities; (3) the extension of counseling and guidance services to adults in the community; (4) sponsorship of various cultural events, including lectures, forums, conferences, exhibits, and workshops; and (5) consultant and resource services rendered by members of the college staff. In accepting the responsibility for providing community services, the junior college has come to be recognized as the "educational center" in many communities.

General Education. Among the "accepted purposes" of the junior college is the responsibility of offering a program of general education. In fulfilling this purpose, junior colleges attempt to provide "a program of education specifically designed to afford young people more effective preparation for the responsibilities which they share in common as citizens in a free society and for wholesome and creative participation in a wide range of life activities."[1] General education represents an effort to counter the effects of over-specialization in both academic and occupational fields of study. Specialization, whether academic or occupational, is not a complete education and it is the purpose of general education to complement such specialization -- not to replace it. To achieve the aims and objectives of general education, junior colleges have established courses of study in the following areas of learning:

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[1] Thornton, James W., The Community Junior College, New York: John Wiley and Sons, Inc., 1960, p.61.

> Communications - Subject matter in this area is concerned with the use of the English language, reading, speaking, and written expression;
>
> Humanities - This area includes the study of art, music, literature, and philosophy;
>
> Natural science - This area includes subject matter in the biological and physical science fields; and the
>
> Social sciences - This area embraces a broad field of study and includes economics, history, political science, sociology and related fields.

Through such general education studies the junior colleges attempt to achieve the aim of "conveying knowledge which is useful to the student in his personal, social, and civic development."[2] General education also assists the student "in becoming a well-informed and cultured person, a well-adjusted member of society, and an effective citizen."[3]

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[2] Hillway, Tyrus, The American Two-Year College, New York: Harper and Brothers, 1958. p. 97.

[3] Ibid.

The President's Commission on Higher Education pointed out that:

> "the crucial task of higher education today, therefore, is to provide a unified general education for American youth. *Colleges must find the right relationship between specialized training on the one hand*, aiming at a thousand different careers, *and the transmission of a common cultural heritage toward a common citizenship on the other*."[4]

In offering courses in occupational and transfer education, the junior colleges recognize the differences among students and in the field of general education the junior colleges recognize the responsibilities which students will share in common as citizens in a democratic society.

Guidance Services. An essential service provided by the junior college is educational, occupational, and personal guidance. Such service in the junior college is necessary in view of the diversified curricular offerings in transfer and occupational programs, general education, and adult education. The "open door" policy of the junior college admits students with a wide range of abilities, interests, aptitudes, and educational backgrounds. The guidance function is essential at the junior college level if students are to be enrolled in appropriate courses of study commensurate with their abilities, interests, and educational background.

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[4] *Higher Education for American Democracy*: A Report of the President's Commission on Higher Education, New York: Harper and Brothers, 1948, pp. 48-49.

The junior college guidance service provides educational counseling for the student interested in transferring to a four-year school. For the student who is interested in occupational training the junior college guidance service offers information about employment opportunities, the education preparation and training required for different occupations, and the testing of abilities, aptitudes, and interests. The guidance service also helps the student to understand himself, through the use of tests to determine his abilities and interests, and his educational experiences.

Removal of Educational Deficiencies. The junior college provides the following educational services designed to permit the student with educational deficiencies an opportunity to remedy or remove such deficiencies:

> "Providing opportunity in junior colleges for the student to take subjects which he may not have completed in high school and which are required for admission to a senior college or for admission to a sequence of courses in a junior college.
>
> "Providing the student who lacks the skills necessary for the successful pursuit of certain college subjects an opportunity to improve his skills after entering the junior college. Among them are reading, writing, speaking, and mathematical skills.
>
> "Providing for students whose high school grade-point average is not sufficiently high to admit them to a four-year college an opportunity to improve their

scholastic record and thus become eligible for admission to such a college."[5]

The functions listed above are often referred to as "salvage" and/or "remedial" functions and are readily performed by the junior colleges. Thus the junior college enables the student with educational deficiencies to remedy or remove such deficiencies, thereby permitting the student to take advantage of educational opportunities which would otherwise be closed to him. In providing the student with the opportunity to remove educational deficiencies, the junior college is providing an important educational service.

SUMMARY

The junior college today is a comprehensive institution more properly referred to as a "community college," offering a broad and varied curriculum and providing a variety of services to students, adults, and the community. The generally "accepted purposes" of the junior college are as follows:

1. Occupational Training
2. Transfer Training
3. Adult Education and Community Services

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[5] Medsker, Leland L., The Junior College: Progress and Prospect, New York: McGraw-Hill Book Company, 1960. p. 64.

4. General Education
5. Guidance Services
6. Removal of Educational Deficiencies

The community college is viewed today as an educational center in the community in which it is located, serving students of varying interests, abilities, aptitudes, educational background, and of all ages. The community college serves the high school graduate, the adult population, and the various economic interests in the community. The college also provides a program of cultural activities for the community and, in so doing, raises the educational and cultural level of the community. The community college is responsive to the needs of the community and students which it serves.

CHAPTER II

POPULATION GROWTH

UTAH POPULATION

A first step in a study designed to assess the need for additional educational facilities is consideration of population changes and trends. It is appropriate to consider general population statistics since school enrollments naturally reflect population changes and trends. The statistics to be considered first are those descriptive of the population of the United States and Utah. Table I, *Population of the United States and Utah, 1930-1980*, permits a comparison of the rates of population growth in the United States and Utah. The significant fact readily discernible in Table I is that since 1930 the population of Utah has been increasing at a faster rate than the population of the United States.

Further examination of Table I reveals the following information: (1) The population of Utah increased from 507,847 in 1930 to 890,627 in 1960, an increase of 75.4 per cent in thirty years. If population projections prove accurate, the population of Utah will increase to 1,524,000 by 1980, an increase of 71.1 per cent in only twenty years. (2) The population of Utah experienced an increase of 201,765 between 1950 and 1960, or a 29.3 per cent increase. Utah will realize an additional population increase of 277,373 (31.2 per cent) in the period of 1960 to 1970. (3) The population of the state will double in the thirty year period from 1940 to 1970. In this period, the population increase will approximate 617,690 people, an increase of 112.2 per cent.

TABLE I

POPULATION OF THE UNITED STATES AND UTAH, 1930-1980

Year	United States[1] Population	Increase	% Increase	Utah[2] Population	Increase	% Increase
1980	252,056,000[3]	40,626,000	19.2	1,524,000[4]	356,000	30.5
1970	211,430,000[3]	32,106,825	17.9	1,168,000[4]	277,373	31.1
1960	179,323,175	27,997,377	18.5	890,627	201,765	29.3
1950	151,325,798	19,161,229	14.5	688,862	138,552	25.2
1940	131,699,275	8,894,229	7.2	550,310	42,463	8.4
1930	122,775,046	17,064,426	16.1	507,847	58,451	13.0

SOURCE: (1) Statistical Abstract of the United States, 1964.

(2) U.S. Bureau of the Census, Census of Population: 1960, Volume I. Part 46, Utah.

(3) Statistical Abstract of the United States, 1964. Series A Projections assumes that "the average annual level of fertility in the 1960-63 period will persist throughout the projection period (1980)."

(4) Projections for 1970 and 1980 from "Population: 1960-1985," Salt Lake County Planning Commission, Salt Lake City, Utah. May, 1964.

SALT LAKE AREA POPULATION

Table II, Population of Utah, Salt Lake County, and the Salt Lake Metropolitan Area, 1930-1980, permits comparisons of the population growth in Utah. It is evident from the Table that the rate of population growth in Salt Lake County exceeds the rate of growth for the State of Utah, and that the rate of population growth in the Salt Lake Metropolitan Area exceeds the rate of growth of both Utah and Salt Lake County.

Population statistics for the Salt Lake Metropolitan Area, which include Salt Lake County and the southern portion of Davis County,[6] are included in Table II since it is reasonable to assume that any public-supported post-high school institution established in the Salt Lake Valley area would serve both Salt Lake County and southern Davis County. Table III, Population of Southern Davis County, 1930-1980, includes population statistics and the rate of population growth for southern Davis County. It is clear that this section of the Salt Lake Metropolitan Area has experienced a rapid population increase --149.4 per cent during the 1950-1960 period -- and will continue to experience substantial increases in population in the future. This rapid increase

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[6] Includes the following communities: Bountiful, Centerville, Farmington, North Salt Lake, South Bountiful, and West Bountiful.

TABLE II

POPULATION OF UTAH, SALT LAKE COUNTY AND THE SALT LAKE METROPOLITAN AREA, 1930-1980

Year	Utah[1] Population	Increase	Per Cent Increase	Salt Lake County[2] Population	Increase	Per Cent Increase	Salt Lake Metropolitan[3] Population	Increase	Per Cent Increase
1980	1,524,000[4]	356,000	30.5	690,500[5]	168,700	32.3	821,000[6]	239,700	41.2
1970	1,168,000[4]	277,373	31.1	521,800[5]	138,765	36.2	581,300[6]	167,300	40.4
1960	890,627	201,765	29.3	383,035	108,140	39.3	414,000	126,707	44.1
1950	688,862	138,552	25.2	274,895	63,272	29.9	287,293	67,764	30.9
1940	550,310	42,463	8.4	211,623	17,521	9.0	219,529	18,444	9.2
1930	507,847	58,451	13.0	194,102	34,820	21.2	201,085	36,018	21.9

SOURCE:
(1) U.S. Bureau of the Census, Census of Population: 1960 Volume I, Part 46, Utah.
(2) Ibid.
(3) Nabers, Lawrence and Jewell Rasmussen, "Employment and Population Analysis and Projections, Salt Lake Metropolitan Area, Utah, and the United States," Bureau of Economic and Business Research, University of Utah, Salt Lake City, Utah, September, 1962.
(4) Statistical Abstract of the United States, 1964.
(5) Projections for 1970 and 1980 from "Population: 1960-1985," Salt Lake County Planning Commission, Salt Lake City, Utah. May, 1964.
(6) Nabers and Rasmussen, op. cit.

TABLE III

POPULATION OF SOUTH DAVIS COUNTY, 1930 - 1980

Year	Population	Increase	Per Cent Increase
1980	130,500[1]	71,000	119.3
1970	59,500[1]	28,576	92.4
1960	30,924	18,526	149.4
1950	12,398	4,492	56.8
1940	7,906	923	13.2
1930	6,983	1,198	20.7

SOURCE: U.S. Bureau of the Census, Census of Population: 1960 Volume I, Part 46, Utah, and Census of Population: 1950 Volume II, Part 44, Utah.

(1) Nabers, Lawrence and Jewell J. Rasmussen, "Employment and Population Analysis and Projections Salt Lake Metropolitan Area, Utah and the United States," Bureau of Economic and Business Research, University of Utah, September, 1962, p. 104. Projections computed by removing projections for Salt Lake County from projections for Salt Lake Metropolitan Area.

in population has resulted recently in the establishment of a new high school in southern Davis County.

Table II provides ample evidence of the concentration of population in the Salt Lake Metropolitan Area, and from the information presented in Table II, it is possible to determine the per cent of the state's population residing in the metropolitan area. Not only have there been substantial increases in the population of the metropolitan area, but the per cent of the state's total population residing in the area is increasing. For the years 1930, 1940, and 1950, approximately 40 per cent of the state's population resided in the Salt Lake Metropolitan Area. In 1960 this percentage increased to 46.4 per cent. By 1970 this figure is expected to increase to 49.5 per cent and in 1980 over one-half (53.7 per cent) of the state's total population will reside in the Salt Lake Metropolitan Area.

URBAN VS. RURAL GROWTH

Table IV, Population of the State of Utah: Rural and Urban, 1900-1980, presents information concerning the distribution of the state's population residing in urban and rural areas. From Table IV it is clearly evident that the population shift has been from rural to urban reas, and that this trend will continue. It is apparent that the shift from rural to urban areas will strongly affect communities located along the "Wasatch Front" and that the Salt Lake

Metropolitan Area will experience the greatest increase in population in the state. The increase in the total population of the Salt Lake Metropolitan Area, beginning with an increase of 30.9 in the period 1940-1950, and increasing to 44.1 per cent in the 1950-1960 decade is ample evidence of the growing concentration of the state's population in the Salt Lake Valley area.

The statistics presented in the foregoing tables have important and serious implications for higher education. The dramatic increases in population in the Salt Lake Metropolitan Area will result in increased enrollments in the public-supported post-high school institutions which serve the area. Presently, close to one-half of the state's total population is being served by only two public institutions, the University of Utah and Salt Lake Trade Technical Institute, while the remaining half of the state's population is served by Utah State University, Weber State College, the College of Southern Utah, three two-year colleges, and Utah Trade Technical Institute. In light of the increasing population and the resulting increases in school enrollments in the Salt Lake Metropolitan Area, serious consideration should be given to the extent to which post-high school educational opportunities are and will be available to meet the diversified needs and demands of the high school graduates in the metropolitan area.

TABLE IV

POPULATION OF THE STATE OF UTAH: RURAL AND URBAN, 1900-1980

	URBAN		RURAL	
Year	Population	Per Cent of Total Population	Population	Per Cent of Total Population
1980[2]	1,156,716	75.9	367,284	24.1
1970[2]	831,616	71.2	336,384	28.8
1960	592,267	66.5(74.9)[1]	298,360	33.5(25.1)[1]
1950	433,294	62.9(65.3)[1]	255,568	37.1(34.7)[1]
1940	305,422	55.5	244,888	44.5
1930	266,112	52.4	241,735	47.6
1920	215,710	48.0	233,686	52.0
1910	172,862	46.3	200,489	53.7
1900	105,441	38.1	171,308	61.9

SOURCE: U.S. Bureau of the Census, Census of Population: 1960, Volume I, Part 46, Utah.

(1) Percentages in parentheses based on the current urban definition. The use of these percentages would result in a urban-rural distribution of population as follows: 1950, urban 449,827 and rural 239,035 and 1960, urban 667,080 and rural 223,547.

(2) Projections for 1970 and 1980 are based on the previous urban definition and were determined by the straight line method.

TABLE V

POPULATION OF SALT LAKE COUNTY, 1930 - 1980

Year	Area	Population	Increase	Per Cent Increase
1980[1]	Salt Lake City	208,600	9,500	4.8
	Outside SLC	481,900	159,700	49.6
	TOTAL	690,500	168,700	32.3
1970[1]	Salt Lake City	199,100	9,646	5.1
	Outside SLC	322,200	128,619	66.4
	TOTAL	521,800	138,765	36.2
1960	Salt Lake City	189,454	7,333	4.0
	Outside SLC	193,581	100,807	108.7
	TOTAL	383,035	108,140	39.3
1950	Salt Lake City	182,121	32,187	21.5
	Outside SLC	92,774	31,085	50.4
	TOTAL	274,895	63,272	29.9
1940	Salt Lake City	149,934	9,667	6.9
	Outside SLC	61,689	7,854	14.6
	TOTAL	211,623	17,521	9.0
1930	Salt Lake City	140,267	22,157	18.8
	Outside SLC	53,835	12,663	30.8
	TOTAL	194,102	34,820	21.2

SOURCE: U.S. Bureau of the Census. Census of Population: 1960. Volume I, Part 46, Utah, and Census of Population: 1950. Volume II, Part 44, Utah.

(1) Projections for 1970 and 1980 from "Population: 1960-1985," Salt Lake County Planning Commission, Salt Lake City, Utah, May, 1964.

SUMMARY

Utah is experiencing its greatest population growth in history since 1930, the rate of growth of the state's population has exceeded that of the United States. The population increased 75 per cent in the period 1930 to 1960. An increase of 71 per cent between 1960 and 1980 is anticipated.

The urban areas along the "Wasatch Front" are experiencing the greatest population increases in the state. This increase has been affected, in part, by the movement of population from rual to urban areas in Utah. In 1930, 38 per cent of Utah's population resided in the urban areas of the state and by 1960 this figure increased to 66 per cent. Predictions indicate this trend will continue.

Among the urban areas experiencing increases in population, the greatest increases have occurred, and will continue to occur, in the Salt Lake Metropolitan Area. While Utah is experiencing its greatest population growth, the rate of growth in Salt Lake County exceeds that of the state, and the rate of population growth in the Salt Lake Metropolitan Area is greater than that of the County. By 1980, if these predictions prove correct, more than one-half of the state's population will reside in the Salt Lake Metropolitan Area.

The implications of these facts for higher education are obvious. Increases in population result in future increases in school populations, in the number of high school graduates, and in the number of students continuing on to higher education. Yet, in the Salt Lake Metropolitan Area, there are only two public-supported post-high school institutions presently serving nearly one-half of the population of the state, while there are no less than seven public-supported post-high school institutions serving the remaining one-half of the state's population.

CHAPTER III

SCHOOL ENROLLMENTS

ENROLLMENT STATISTICS

This section of the junior college study reports information relating to school enrollments. The growth in population predicted for the state of Utah will be reflected in increased school enrollments, not only in the state's elementary and secondary schools, but in institutions of higher learning as well. Significant increases in population, and thus school enrollments, will occur in areas along the "Wasatch Front," and in the Salt Lake Metropolitan Area in particular. It can be expected then that the University of Utah will be called upon to accommodate a major portion of the predicted increases in enrollments, with Salt Lake Trade Technical Institute and the private post-high school institutions realizing proportionately smaller increases. The predicted increases in school enrollments, plus certain other factors which bear directly on enrollments in higher education, could operate in such a way as to limit post-high school educational opportunities in the Salt Lake Metropolitan Area.

To bring the problem of enrollments into clearer perspective, one need to review the enrollment growth rates of Utah and Salt Lake County. With the dramatic shift in population from rural to urban areas and the rapid increase in the population along the "Wasatch Front," the result has been an increase in total school enrollments in Salt Lake County that exceed the enrollment growth rate for the state as a whole. Table VI, Total School Enrollments, All Grades, Utah and Salt Lake County, clearly indicates this fact.

TABLE VI

TOTAL SCHOOL ENROLLMENTS, ALL GRADES, UTAH AND SALT LAKE COUNTY

	Utah			Salt Lake County		
Year	Enrollment	Increase	Per Cent Increase	Enrollment	Increase	Per Cent Increase
1970	329,800	39,251	13.5	141,100	18,800	13.3
1965	290,549	43,763	17.7	122,300	21,393	21.2
1960	246,786	47,415	23.8	100,907	21,629	27.3
1955	199,371	38,336	23.8	79,278	21,197	36.5
1950	161,035	10,413	6.9	58,081	7,091	13.9
1945	150,622	7,886	5.5	50,990	2,512	5.2
1940	142,736	-4,064	-2.8	48,478	-1,218	-2.5
1935	146,800	- 492	-	49,696	- 585	-1.2
1930	147,292	5,936	4.2	50,281	3,332	7.1

SOURCE: Utah State Department of Public Instruction.

Since 1945, the five-year growth rate of school enrollments in Salt Lake County has exceeded that of the state. For the 1960-1970 period, it is anticipated Salt Lake County will realize an increase in school enrollments of 41.1 per cent, while the increase in the state during the same period will be 33.6 per cent. Substantial increases in school enrollments, such as those Salt Lake County will experience in the next few years, are expected to have a direct bearing on the number of high school graduates seeking post-high school educational opportunities.

Table VII, Projected School Enrollments, All Grades, State of Utah, reports enrollment projections through 1970 from three separate sources: Utah State Department of Public Instruction, the Governor's School Committee, and the Utah Coordinating Council of Higher Education. The predictions by the latter organization are somewhat conservative since they are based on an earlier study of enrollments. Indeed, its estimates are significantly below the actual enrollments for the years 1960 through 1964, thus its projections through 1970 are expected to be substantially under probable enrollments for those years. There is substantial agreement, however, in the projections cited which suggests the validity of these data.The projections reported in Table VII support those included in Table VI.

TABLE VII

PROJECTED SCHOOL ENROLLMENTS, ALL GRADES, STATE OF UTAH

Year	Utah State Dept. Pub. Instruction[1]	Interim Report Governor's School Comm.[2]	Utah Coord. Council of Higher Educ.[3]
1970-71	329,800	-	295,599
1969-70	321,800	317,100	292,458
1968-69	313,663	315,500	288,094
1967-68	306,359	309,900	282,700
1966-67	298,670	303,400	276,472
1965-66	290,549	296,800	270,565
1964-65	282,611[4]	291,600	265,884
1963-64	277,223[4]	277,500	257,741
1962-63	266,318[4]	266,318[4]	248,061
1961-62	254,843[4]	254,843[4]	229,193
1960-61	245,123[4]	245,123[4]	231,198

(1) Student Enrollment Projection 1964-65 to 1969-70.

(2) Exhibit #11.

(3) Estimated Enrollment in Utah's Elementary and Secondary Schools by Districts and Grades for the Period 1961-1975.

(4) Actual enrollment figures.

Table VIII, A Comparison of Utah and Salt Lake County Population and School Enrollments, reports the growth rates in population and school enrollments. The previous section of the junior college study considered population statistics which indicate that the population of Salt Lake County is increasing at a faster rate than the population of Utah. Table VI, in this section indicates that the same is true of total school enrollments. Table VIII makes it possible to compare population and total school enrollment growth rates for Utah and Salt Lake County. The statistics for Salt Lake County are significant since Table VIII indicates that its school enrollments are increasing at a faster rate than its total population. This fact further dramatizes the impact of school enrollments in the Salt Lake County area.

General population statistics, reported in the previous section of this study, show that the population of Utah is increasing at a faster rate than the population of the United States. Statistics on the college-age population indicate a similar trend. Table IX, College Age Population--18 to 21 Year Age Group, reflects the general population trend and clearly reveals that Utah's college-age population is increasing faster than the same group for the United States as a whole. For the ten-year period, 1960-1970,

TABLE VIII

A COMPARISON OF UTAH AND SALT LAKE COUNTY POPULATION AND SCHOOL ENROLLMENTS

UTAH

Year	Population	Per Cent Increase	School Enrollments	Increase	Per Cent Increase
1980	1,524,000	30.5			
1970	1,168,000	31.2	329,800	82,214	33.3
1960	890,627	29.3	246,786	85,751	53.2
1950	688,862	25.2	161,035	18,299	12.8
1940	550,310	8.4	142,736	-4,556	- .031
1930	507,847	13.0	147,292	5,936	4.2

SALT LAKE COUNTY

Year	Population	Per Cent Increase	School Enrollments	Increase	Per Cent Increase
1980	690,500	32.3			
1970	521,800	36.2	141,000	40,193	39.8
1960	383,035	39.3	100,907	42,826	73.7
1950	274,895	29.9	58,081	9,603	19.8
1940	211,623	9.1	48,478	-1,803	- .0358
1930	194,102	21.2	50,281	3,332	7.1

SOURCE: Utah State Department of Public Instruction this population group in the United States is anticipated to increase 56.6 per cent, while in Utah the same group is expected to increase 77.2 per cent. Thus, the increase in the number of potential students eligible for post-high school education poses a further burden on existing educational institutions. With the preponderant part of Utah's population in Salt Lake County, it is this area of the state which will realize the greatest strain on the two public-supported post-high school institutions available to its students. This fact, combined with the increasing number of high school graduates continuing on to higher education, presents serious problems as to how such students are to be accommodated.

Information as to the number of high school graduates is included in Table X, Total High School Graduates, Utah and Salt Lake County, 1930-1970, which reflects the increases in population and school enrollments for Utah and Salt Lake County. The number of high school graduates in Utah and Salt Lake County has increased substantially, with the greater increases occurring in Salt Lake County. Projections by the Office of Institutional Research, University of Utah, increases the number of high school graduates for the state to 16,950 in 1965 and 20,946 by 1970. Projections by the Utah State Department of Public Instruction, concerning the number of high school graduates in Salt Lake County by 1970,

TABLE IX

COLLEGE AGE POPULATION - 18 TO 21 YEAR AGE GROUP

	UNITED STATES			UTAH		
Year	Population	Increase	Per Cent Increase	Population	Increase	Per Cent Increase
1970	14,429,000	2,469,000	20.6	94,000	21,000	28.8
1965	11,960,000	2,747,392	29.8	73,000	19,863	37.4
1960	9,212,608	414,131	4.7	53,137	7,372	16.1
1950	8,798,477	-955,040	-9.8	45,765	630	1.4
1940	9,753,517	---	-	45,135	--	-

SOURCE: Fact Book on Western Higher Education, January, 1963, Western Interstate Commission for Higher Education.

predict 6,450 graduates for that year. This prediction is somewhat more conservative than that of 7,955 predicted by the Utah Coordinating Council of Higher Education.

Of significant importance is the fact that the number of high school graduates in Salt Lake County will increase to 7,955 by 1970, an increase of 79.5 per cent. This substantial increase in only ten years will impose serious burden on the educational facilities available to high school graduates in the Salt Lake area.

Another factor of considerable importance concerns the number of Salt Lake County high school graduates who continue on to higher education. Table XI, Number and Per Cent of Salt Lake County High School Graduates Who Continue in Higher Education, indicates that the per cent of high school graduates continuing on to higher education has increased from 58.7 per cent in 1960 to 77.1 per cent in 1964. This increase in the percentage of high school graduates continuing on to higher education means that there are 917 more high school graduates continuing their education in college in 1964 than in 1960. By projecting the percentage figures for 1964 to 1970, approximately 6,100 Salt Lake County high school graduates are estimated to continue their education beyond high school. This represents an increase of 3,500 (134.0 per cent) over 1960.

TABLE X

TOTAL HIGH SCHOOL GRADUATES, UTAH AND SALT LAKE COUNTY, 1930-1970

		Utah	Per Cent		Salt Lake County	Per Cent
Year	Graduates	Increase	Increase	Graduates	Increase	Increase
1970	18,502[1]	3,575	24.1	7,955[1]	1,465	22.7
1965	14,927[1]	3,657	32.5	6,490[1]	2,059	46.5
1960	11,270	2,469	28.5	4,431	1,402	46.3
1955	8,657	2,154	32.3	3,029	1,575	108.3
1950	6,678	- 441	-6.2	1,454*	-1,029	-41.4
1945	7,119	-1,006	-12.4	2,483	- 314	-11.2
1940	8,125	857	11.8	2,797	- 79	- 2.7
1935	7,268	2,319	46.9	2,876	1,467	104.1
1930	4,949	2,027	69.4	1,409	638	82.7

SOURCE: Utah State Department of Public Instruction.

(1) Projections for 1965 and 1970 from Utah Coordinating Council of Higher Education.

* Change-over from 3 to 4 years in high school.

TABLE XI

NUMBER AND PER CENT OF SALT LAKE COUNTY HIGH SCHOOL GRADUATES WHO CONTINUE IN HIGHER EDUCATION

Year Graduated	Number Graduated	Number Continuing Education	Per Cent Continuing
1964	4,979	3,840	77.1
1963	4,710	3,270	69.4
1962	4,737	3,117	65.8
1961	4,684	2,723	58.1
1960	4,472	2,625	58.7

SOURCE: Utah Coordinating Council of Higher Education.

Table XII, Ratio of College Freshmen to High School Graduates, makes possible a comparison of the number and per cent of high school graduates in Utah, Salt Lake County, and Davis County who continue on to higher education. Statistics for Davis County are included here since any additional post-high school educational facilities in the Salt Lake area would also affect Davis County. The per cent of Utah high school graduates continuing on to higher education is significantly high, and though the percentages for Salt Lake and Davis Counties are somewhat less, the figures are nonetheless significant. The number of high school graduates in both Salt Lake and Davis Counties and the steadily increasing percentage of graduates continuing on to higher

TABLE XII

RATIO OF COLLEGE FRESHMEN[1] TO HIGH SCHOOL GRADUATES[2]

Year	Utah			Salt Lake County			Davis County		
	Graduates	Freshmen	Ratio	Graduates	Freshmen	Ratio	Graduates	Freshmen	Ratio
1964	12,747[3]	10,993	86.2	4,979[3]	3,840	77.1	1,062[3]	896	84.4
1963	11,842	9,272	78.3	4,710	3,270	69.4	909	749	82.4
1962	12,188	8,515	69.9	4,737	3,117	65.8	971	645	66.4
1961	12,376	8,004	64.7	4,684	2,723	58.1	889	564	63.4
1960	11,331	7,222	63.7	4,472	2,625	58.7	733	466	63.6
1959	10,141	6,036	59.5	3,736	2,091	56.0	621	371	59.7

SOURCE: Utah Coordinating Council of Higher Education.

(1) Includes freshmen students enrolled in all post-high school institutions.

(2) Includes high school diploma and equivalency certificates.

(3) Equivalency certificates not included.

education serve further to complicate the problem of providing adequate post-high school educational facilities.

The cumulative effect of population growth and the college-bound trend, both intensified in the Salt Lake Metropolitan Area, will result in a sharp increase in the number of high school graduates going on to college. For the period 1960-1970 the number of high school graduates going on to college will double.

A factor which further contributes to the increase in the number of high school graduates is the number of students who remain through four years of high school and graduate. Table XIII, High School Graduates as Per Cent of Ninth Graders, indicates that the per cent of ninth graders who graduate from high school has increased from 76.6 per cent in 1956-57 to 81.0 per cent in 1961-62. This increase means that there are anticipated to be approximately 900 more high school graduates in 1965 than in 1957. By 1970 this figure is expected to increase to approximately 1200 to 1350 more students. It is interesting to note that the percentage figures for Utah run approximately eight per cent ahead of the United States.

TABLE XIII

HIGH SCHOOL GRADUATES AS PER CENT OF NINTH GRADERS

Year Entered Ninth Grade	Number	Year Graduated	Number Graduated	Per Cent Graduating
1961-62	20,642	1965	16,720	81.0
1960-61	15,740	1964	12,747	81.0
1959-60	15,065	1963	11,825	78.5
1958-59	15,570	1962	12,173	78.2(69.7)[1]
1957-58	16,088	1961	12,352	76.8
1956-57	14,752	1960	11,300	76.6(68.5)[1]

SOURCE: Utah State Department of Public Instruction.

(1) Figures in parentheses are percentages for the United States.

A contributing factor to the problem of increasing enrollments in higher education institutions is the per cent of college freshmen who continue on to the sophomore year. The per cent of Utah, Salt Lake and Davis County freshmen who continue on to the sophomore year is reported in Table XIV, Survival Ratio of College Sophomores to College Freshmen of the Preceding Year.

The ratio for the state has increased approximately ten per cent from 1959 to 1963. During the same period the ratio for Salt Lake County students was 15.3 per cent while that of Davis County has fluctuated and shows a decrease of 6.4 per cent.

TABLE XIV

SURVIVAL RATIO OF COLLEGE SOPHOMORES TO COLLEGE FRESHMEN OF THE PRECEDING YEAR

Years Freshmen	 Sophomores	Utah Ratio	Salt Lake County Ratio	Davis County Ratio
1963	1964	76.0	81.9	58.1
1962	1963	65.6	73.1	53.0
1961	1962	61.7	70.9	61.0
1960	1961	62.3	64.2	59.8
1959	1960	66.8	66.6	64.4

SOURCE: Utah Coordinating Council of Higher Education.

Table XV, Undergraduate Student Migration, 1958 and 1963, reports the number of undergraduate students leaving Utah to attend out-of-state institutions and the number of out-of-state undergraduate students migrating to Utah to attend public universities and colleges. The percentage (3.4 %, 1963) of students leaving Utah to attend institutions in other states is the lowest in the nation. However, the number of undergraduate students from out-of-state attending public institutions in Utah is large (3,804), and represents 16.4 per cent of the total number of undergraduates enrolled in Utah's public institutions. Thus, Utah is experiencing an "unfavorable trade balance" in higher education. The figures indicated here are increased substantially (to 35 per cent) when Utah's private institutions are included. The migration of undergraduate students to Utah is a contributing factor to the problem of increasing enrollments in Utah's post-high school institutions.

TABLE XV

UNDERGRADUATE STUDENT MIGRATION, 1963

Total Utah Undergraduates	Total Leaving Utah to Attend College	Per Cent
19,007	623	3.4
Total Number of Undergraduates Attending Colleges in Utah	**Total Migrating to Utah to Attend College**	**Per Cent**
22,811	3,804	16.7

SOURCE: U. S. Office of Education, Department of Health, Education, and Welfare.

Enrollment statistics for the University of Utah reported in Table XVI, Total Daytime and Freshman Enrollments, University of Utah, 1950-1975, show substantial enrollment increases in the number of total daytime and freshman students. The figures for total daytime enrollment indicate that between 1960 and 1970 the enrollment will double, and by 1975 will increase an additional 29.2 per cent. Freshman enrollments are expected to increase approximately 110.0

per cent between 1960 and 1970, and further predictions indicate an additional 19.7 per cent increase by 1975.

TABLE XVI

TOTAL DAYTIME AND FRESHMAN ENROLLMENTS
UNIVERSITY OF UTAH
1950 - 1975

Year	Total Daytime Enrollment	Per Cent Increase	Freshman Enrollment	Per Cent Increase
1975	23,900	29.2	6,010	19.7
1970	18,500	37.0	5,020	23.3
1965	13,500	47.6	4,070	70.9
1960	9,148	23.9	2,381	6.2
1955	7,383	2.8	2,241	64.2
1950	7,182	--	1,365	--

SOURCE: Office of Institutional Research and "Report of the Registrar, 1962-63," University of Utah.

A fact of considerable importance is that the University's total daytime enrollment will, by 1970 and thereafter, increase at a faster rate than the freshman enrollment. This development will further complicate the enrollment problem and could possibly result in limiting the number of freshman students admitted to the University in the future.

The importance of the statistics as they pertain to the Salt Lake area is that 79.5 per cent of all Utah students enrolled at the University of Utah are from Salt Lake County. When Davis County is included, the figure is increased to 86.2 per cent. An additional factor is that two-thirds of all entering freshmen students are graduates of some sixteen high schools located in Salt Lake and Davis Counties. These facts, coupled with the substantial increases in population and school enrollments predicted for the Salt Lake Metropolitan Area, demonstrate the urgency and magnitude of the problem of providing adequate post-high school educational facilities, and thus opportunities, for the increasing number of high school graduates.

SUMMARY

Increases in total school enrollments for Utah and Salt Lake County are reflected in the growth of the general population. Total school enrollments in Salt Lake County are increasing at a faster rate than are those for the state as a whole. Projections of total school enrollments by the Utah State Department of Public Instruction, the Governor's School Study Committee, and the Utah Coordinating Council of Higher Education are in substantial agreement, with serious implications for future enrollments in Utah institutions of higher learning.

School enrollments in Utah and Salt Lake County are increasing at a faster rate than the general population. For example, it is noted that in 1960 school enrollments in Salt Lake County increased at a rate nearly twice that of the general population, and predictions indicate that school enrollments will continue to increase at a faster rate than the population.

The increase in the college-age population -- 18-21 year age group -- has increased at a faster rate than the same group for the United States. The college-age group is expected to increase nearly 80 per cent in the period, 1960 to 1970, a significant factor in the increasing demand for higher education opportunities.

High school graduates in Salt Lake County are increasing in number, with the rate of growth higher than that for the state of Utah. The number of high school graduates is expected to more than double in the period of 1955 to 1965.

In addition to the increases in the number of college-age youth and high school graduates, the following factors contribute further to the increasing number of students demanding opportunity for higher education.

1. The number of high school graduates who continue their education beyond high school has increased in Salt Lake County from 58.7 per cent in 1960 to 77.1 per cent in 1964, or an increase of approximately 900 students.

2. The number of high school students who enter the ninth grade and complete a full four years and graduate has increased. In Utah this group has increased from 76 per cent to 81 per cent between 1960 and 1965, resulting in an expected increase of approximately 900 more graduates by 1965. By 1970, this figure is estimated to be 1200 or more additional graduates over the number graduated in 1960.

Other factors which bear directly on the enrollment picture in higher education and which serve to increase the number of students to be educated in institutions of higher learning are the following:

1. Undergraduate student migration to Utah of out-of-state students exceeds the migration of Utah students to out-of-state institutions.
2. There is an increase in the number of college freshmen students who continue on to the sophomore year.

Total daytime and freshman student enrollments have increased at the University of Utah. During the period 1960 to 1970 total daytime and freshman enrollments are expected to double, and the total daytime enrollment to increase at a faster rate than the freshman enrollment after 1970.

RECOMMENDATIONS

It is recommended that:

1. Additional post-high school facilities be established in the Salt Lake County area to more adequately provide educational opportunities for the increasing number of students predicted for the coming years.

CHAPTER IV

EDUCATIONAL OPPORTUNITIES

INTRODUCTION

An examination of post-high school educational opportunities is an essential part of a study designed to assess the need for additional educational institutions. Of the various factors to be considered in such a study, none is as important as an evaluation of the existing educational opportunities in the area under study. In evaluating the present educational opportunities in the Salt Lake Metropolitan Area, it is necessary to review admission requirements, tuition charges, and curricular offerings of the existing post-high school institutions, since each of these factors has a direct bearing on the educational opportunities available to high school graduates.

In the Salt Lake Metropolitan Area there are six post-high school institutions which provide educational opportunities for high school graduates. Two public institutions -- the University of Utah and Salt Lake Trade Technical Institute -- and four private institutions -- Westminster College, LDS Business College, Stevens Henager College and Weltech College -- comprise this group. The requirements for admission, tuition charges, and curricular offerings vary with each institution, depending upon its general purposes and objectives.

ADMISSION REQUIREMENTS

Requirements for admission to post-high school institutions vary considerably from those with highly selective admission requirements to those with an "open door" policy, whereby all students over eighteen years of age are admitted to the school. The following is an examination of the admission requirements currently in effect at post-high school institutions in the Salt Lake area.

The University of Utah. The requirements for admission to the University of Utah provide for the admission of freshmen students under one of three plans. They are admitted by high school credential, through an early admission program, or by special action of the Committee on Credits and Admissions.[7] The plan which provides for admission by high school credential requires the prospective student to:

> "present an official transcript from an approved high school showing that he has completed satisfactorily a full high school course and has earned at least 15 units of high school work in subjects recognized by the University."[8]

Of the "15 units of high school work" specified, four are "required" and the remainder "recommended." In the Colleges of Engineering, Mines and Mineral Industries, seven units are "required" and the remaining eight are to be selected from a list of "recommended" high school subjects.

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[7] General Catalog, 1964-65, University of Utah, Salt Lake City, Utah, p. 53.

[8] Ibid.

Admission to the University under the "early admission program" is open to qualified high school students of high achievement, while the Committee on Credits and Admissions passes on the admission of students who have not graduated from high school. In the latter instance the student may seek admission to the University by "passing such general or special tests as the Committee may require."[9] Thus, the University makes provision for the admission of both high school graduates as well as for those who have not graduated. The following statement in the General Catalog summarizes the University policy on admissions:

> "Approval for admission is given in general to applicants whose credentials and placement test results indicate that they have the ability and preparation required for successful college work."[10]

The University requirement that a student's "credentials and placement test results indicate that they have the ability and preparation required for successful college work" is based on the student's high school grade point average in "basic" subjects, i.e., English, history, mathematics and science, and scores on the placement tests in English and natural science. On the basis of this information if the student's predicted university grade point average is 1.7, the student is admitted in "good standing" in one of the colleges of the University. Students whose predicted grade point average is below 1.7 are placed on academic probation in their first quarter in college. Failure to meet University academic standards may result in dismissal from the University. In practice, a student whose predicted grade point average is below 1.4 is refused admission to the University.

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[9] _Ibid._, p. 54.

[10] _Ibid._, p. 53

Placement test results are used by University officials to "place" students in remedial classes in English, mathematics, speech and reading. Placement test results and achievement in high school assist University officials in reaching decisions regarding the admission or denial of a student to the University.

The requirements for admission to the University of Utah can be described as "liberal" and provide for the admission of high school graduates who meet the "ability and preparation" requirements. Students denied admission to the University are those whose high school grade point average and placement test results suggest little chance of success at the University. It is quite likely that students admitted to the University in a probationary status find it difficult to meet University academic standards.

Salt Lake Trade Technical Institute. The Salt Lake Trade Technical Institute subscribes to the "open door" policy regarding admissions and is "open to all applicants sixteen years of age and over."[11] Provision is also made for the admission of students who have not graduated from high school as well as for students currently enrolled in a local high school.[12] Salt Lake Trade Technical Institute admits all students meeting the stated requirements and imposes no requirements concerning high school subjects or grade point average.

Westminster College. Admission standards of Westminster College provide for the following:

> "Admission in good standing is granted applicants who have been graduated from an accredited high school with a four-year grade average of C or better based on courses in the areas of English, foreign languages, social studies, natural sciences, and mathematics (algebra or higher)."[13]

Though the requirement of a four-year grade average of C or better is based on certain academic subject areas, there is no prepared list of required subjects. The catalog states that "Westminster recommends but does not require the following high school units."[14]

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[11] Catalog, 1963-64, Salt Lake Trade Technical Institute, Salt Lake City, Utah, p. 5.

[12] Ibid.

[13] Catalog Edition, 1962-64, The Utah Westminster, Salt Lake City, Utah, p. 34.

[14] Ibid.

English	4 years
Mathematics and laboratory science	4 years
Social studies	2 years
Foreign language	2 years

Westminster College makes provision for admitting students "who cannot meet the grade standards...(four-year grade average of C or better) or whose previous study was in an unaccredited institution."[15] Students admitted under such conditions are placed on academic probation and must meet the conditions of "good standing" or face academic suspension.

The admission standards of Westminster College are similar to the admission requirements of many four-year institutions, wherein a C average is required for admission, but exceptions are made in certain instances by a faculty committee on admissions.

LDS Business College. The LDS Business College has established the following admission requirements:

> "Graduation from a standard high school is required for admission. Applicants over high school age who are otherwise qualified may apply for special admission."[16]

The LDS Business College lists itself as an "accredited junior college of business"* and provides for the admission of all high school graduates and those over high school age who are "otherwise qualified." Presumably consideration is also given applicants who have not graduated from high school. There are no requirements concerning high school subjects or grade point averages.

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[15] Ibid.

[16] General Catalog, 1964-65, LDS Business College, Salt Lake City, Utah, p. 38.

*Note: Its accreditation is granted by the Accrediting Commission for Business Schools, Washington, D.C.

Stevens Henager College. Stevens Henager College Catalog states it is an "accredited junior college of business"* and is a "private school that will never refuse admittance to any worthy, respectable student who is qualified to study at the college level and to use the college's facilities."[17] This statement of policy suggests adherence to the "open door" policy wherein the institution admits all applicants who apply. The "school policies" do not suggest any particular high school preparation or grade requirements. The college is open to all who are "qualified to study at the college level."

TUITION CHARGES

Tuition charges levied by post-high school institutions, as a condition of admission, have a direct bearing on educational opportunities available to high school graduates, since high tuition charges serve to reduce educational opportunities available to high school graduates, since high

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*Note: Its accreditation is granted by the Accrediting Commission for Business Schools, Washington, D.C.

[17] Catalog, Stevens Henager College, Salt Lake City, Utah, p. 43.

TABLE XVII
A COMPARISON OF TUITION CHARGES OF POST-HIGH SCHOOL INSTITUTIONS IN THE SALT LAKE COUNTY AREA

Institution	Tuition	Fees	Other Costs
University of Utah	$300.00[1]	All regular fees are included in tuition charge	Books and supplies[2]
Salt Lake Trade Technical Institute	$ 75.00	$10.00 Registration fee 3.00 Student activity 12.00 Student Union Bldg. 3.00 Student insurance	Books, tools, and supplies ($40.00 to $170.00 depending on course of study)
Westminster College	$700.00[3]	$10.00 Student Union assessment	Books and supplies
LDS Business College	$495.00[4]	$50.00 Registration fee 3.00 Locker fee 100.00 Machine fee[5]	Books and supplies
Stevens Henager College	$555.00 - $1665.00[6]	$25.00 Registration fee	Books and supplies ($25.00 to $30.00)
Weltech College	$1145.00	An enrollment fee of $125.00 is included in tuition charges	Books and supplies

(1) Includes registration, tuition, building fee, and student services.
(2) Books and supplies cost approximately $50.00 to $75.00 per year.
(3) Includes "general fees."
(4) Tuition is $450.00 if paid in advance.
(5) For students enrolling in data processing course.
(6) Tuition varies depending on course of study and length of time for the course.

tuition charges serve to reduce educational opportunities to those unable to afford such charges. It is pertinent at this point to examine the tuition charges of the post-high school institutions in the Salt Lake Metropolitan Area. Table XVII presents a summary of the tuition charges and other fees assessed by the post-high school institutions in this area.

It is evident that the range of tuition charges is considerable, with the public institutions levying the lowest tuition. Private institutions, as expected, require the highest tuition. Tuition charges and other fees (itemized, unless included in the tuition) are indicated, while the cost of books and supplies, unless otherwise noted, is assumed to be approximately the same for all institutions. In general, the cost to the student for books and supplies is approximately $50 per year.

CURRICULAR OFFERINGS

An important consideration in this section of the study is an analysis of the curricular offerings found in the post-high school institutions in the Salt Lake Metropolitan Area. Curricular offerings vary among institutions and are determined, for the most part, by the nature, objectives, and purposes of the institution as well as the students to be served. An analysis of curricular offerings makes possible an assessment of the different kinds of professions and occupations for which students in the Salt Lake Metropolitan Area may prepare.

The University of Utah. A student admitted to the University in good standing is permitted a wide range of choices in academic programs leading to the baccalaureate degree. Assuming that the student has the required high school preparation and meets University requirements, he may select a major from among the following academic majors offered at the University of Utah.[18]

Accounting
Air Science
Anthropology
Architecture
Art

Ballet
Banking and Finance
Biological Sciences
Botany
Business

Ceramic Engineering
Chemical Engineering
Chemistry
Child Development
Civil Engineering

Clothing and Textiles
Dance
Distributive Education
Economics
Electrical Engineering

Elementary Education
English
Foods and Nutrition
French
Fuels Engineering

General Sciences
Genetics
Geography
Geological Engineering
Geology

Geophysics
German
Greek
Health Education
Health, Phys. Ed. & Recreation

History
Home Economics
Industrial Engineering
Journalism
Language Arts

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[18] University of Utah, op. cit., pp. 66-67.

Latin
Law
Management
Marketing
Mathematics

Mechanical Engineering
Medical Biology
Medical Technology
Metallurgical Engineering
Meteorology

Microbiology
Military Science
Mineralogy
Mining Engineering
Molecular Biology

Music
Naval Science
Nursing
Office Administration
Pharmacy

Philosophy
Physical Education
Physical Sciences
Physics
Political Science

Psychology
Recreation
Sculpture
Social Studies
Sociology

Spanish
Speech Education
Speech
Theater
Zoology

In addition to the wide selection of majors listed above, the College of Letters and Science offers a two-year diploma program leading to the Associate in Arts and the Associate in Science diploma. The two-year diploma program is designed for students who plan "to remain at the University for only the first two years and wish an academic program of the type offered by a junior college.[19]

The two-year diploma program enables students in good standing to transfer at any time to a regular four-year baccalaureate program. The courses of study offered under the two-year diploma program are limited to the following:[20]

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[19] Ibid., p. 146.

[20] Ibid., pp. 147-148.

Accounting
Arts and Crafts
Commercial and Advertising Art
Costume Design and Dressmaking
Dance
Drafting
Homemaking
Library Clerk
Music
Recreational Leadership
Radio and Television Speech
Secretarial
Surveying

The Division of Continuing Education offers a two-year program in the Institute for Technological Training for the training of engineering technicians and aides.[21] The Technical Institute offers certificates and the Associate Technical Aid Diploma for the students completing programs in the field of computer sicence, electronics, civil, mechanical, chemical and metallurgical, and industrial technology.[22]

The University, recognizing that a number of entering students are inadequately prepared in the basic skills, offers preparatory and remedial courses. These preparatory and remedial courses enable students to improve certain basic skills required in University work and thus successfully undertake a regular university program:[23]

English AX - Preparatory English
English 25X - Review of Fundamentals of Writing
Mathematics AX - Drill in the Essentials of Mathematics
Reading AX - Drill in Reading Speed and Comprehension
Speech AX - Remedial Speech
Educational Psychology 42 - Techniques of Good Study Habits.

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[21] Ibid., p. 189.

[22] Ibid., p. 189.

[23] Ibid., p. 281.

It is clear that the University is attempting to offer a broad program. Though primarily concerned with pre-professional and professional education, the University provides a limited selection of two-year programs to interested students. In addition, the University offers preparatory and remedial courses for students who are inadequately prepared in basic skills to undertake regular university work.

Salt Lake Trade Technical Institute. The Salt Lake Trade Technical Institute provides a variety of training programs in several occupational areas. The following information describes the types of training programs in effect at the present time.

> Day School Trade Preparatory: These full-time training programs are designed for those individuals seeking to gain the skill and technical knowledge needed to enter an occupation and to progress speedily and effectively to the fully-trained or journeyman level.
>
> . . . .
>
> Extended Day School Trade Preparatory: These part-time training programs also are designed to teach the skills and technical knowledge needed to obtain employment in a skilled occupation. The courses are offered for those persons who are unable to enroll in the full-time Day School program because of financial, family or other responsibilities. The courses are also designed to teach new skills to those workers now employed but who face loss of jobs in the future because of automation or technical progress.
>
> . . . .
>
> Apprentice Training. For the worker who is learning his trade through an apprenticeship program or some other

> type of on-the-job training, the school provides related theory and technical training programs.
>
> . . . .
>
> Occupational Extension: These programs assist the worker who has reached the fully trained or journeyman level to keep abreast of new developments in his field and to prepare himself for advancement.[24]
>
> . . . .
>
> Supervision and Management: These special courses are designed to assist foremen, supervisors and executives and those preparing for such positions to be informed of new techniques, developments and improved methods in dealing with the complex problems of business and industrial supervision and management.
>
> . . . .
>
> Manpower Training Program: A federal program to provide certain groups with new skills and free job retraining will be operated at Trade Tech.[25]
>
> . . . .

Students admitted to Salt Lake Trade Technical Institute are enrolled in one of the regular courses of study and in selected "related" subjects. Related training is described in the Institute catalog as follows:

> Success in a trade requires knowledge of related theory. The special "how" and "why" aspects of trades and occupations, along with review and continuance of learning in the general academic subjects, ... are offered by this department (Related Training).[26]

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[24] Salt Lake Trade Technical Institute Catalog,1963-64,p.4.

[25] Ibid., p. 5.

[26] Ibid., p. 11

Related subjects required of students enrolled in regular courses of study include the following:

- Mathematics
- Communications
- Business Principles
- Blueprint Reading
- Industrial Physics
- Physics for Electronics
- Human Relations
- Shop-related Subjects

The regular courses of study offered at Salt Lake Trade Technical Institute are listed below. Numbers in parentheses indicate the number of hours of "related" training required each day in the regular course of study.

- Auto Body Repair (1)
- Auto Painting (1)
- Automobile Mechanics (1)
- Barbering (*)
- Building Technology (1)
- Diesel Mechanics (1)
- Drafting-Architectural (1)
- Drafting-Mechanical (1)
- Electricity (2)
- Electronic Technology (2)
- Machine Shop Technology (2)
- Business Practice
- Stenographic Course
- Bookkeeping Course
- Commercial Art (1)
- Cosmetology
- Practical Nursing
- Technical Illustrating (1)
- Printing (1)
- Welding, Cutting, Metal Fabricating (1)

(*) Training in "related" subjects is given on an irregular schedule.

To assist Salt Lake Trade Technical Institute in the evaluation of its courses, advisory committees have been established. The Trade Advisory Committees, with representation from business and industry, periodically review all courses offered at the Institute in order to keep courses current with recent developments in the field. Joint Apprenticeship Committees, consisting of representatives of labor and management, evaluate and review the various apprenticeship training programs offered by the Institute. Through these committees the Institute evaluates the various courses of study and the training programs which are available to students.

Westminster College. Westminster College is a liberal arts college offering the baccalaureate degree in the following academic fields:[27]

- Art
- Biology
- Chemistry
- Economics and Business Administration
- Education
- Engineering
- English
- Political Science
- Psychology
- Religion
- Geology
- German
- History
- Mathematics
- Music
- Philosophy
- Physical Education
- Physics
- Sociology
- Spanish
- Speech

In addition the College offers instruction in the following professional and pre-professional curricula:

- Church Vocations
- Pre-Dentistry
- Elementary Education
- Secondary Education
- Nursing
- Pre-Pharmacy
- Engineering
- Pre-Law
- Pre-Medicine
- Music
- Social Administration

Westminster College restricts its offerings to the liberal arts and pre-professional courses which are in keeping with the nature and objectives of the institution.

LDS Business College. The LDS Business College is a junior college of business and restricts its offerings to the field of business, with programs in the following fields which lead to the Associate Degree in Business.[28]

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[27] The Utah Westminster, op. cit., p. 47.

Bookkeeping
Higher Accounting and Business Administration
Higher Accounting and Automatic Data Processing
Marketing
Office Machines
Stenographic
Executive Secretarial
Stenotype
Clerical

Stevens Henager College. The Stevens Henager College, like the LDS Business College, is a junior college of business and, thus, specializes in business and related courses. The courses of study listed below lead to the Associate in Commercial Science Degree.[29]

Higher Accounting and Business Administration
Automation Administration
Accountancy and Business Management (Composite)
Accountancy
Management
Executive Secretarial
Secretarial
Secretarial Finishing
General Clerical
General Business
Stenographic

Weltech College. The curricular offering of Weltech College is restricted to a single specialized course of study in Industrial Electronics.

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[28] LDS Business College, *op. cit.*, p. 6ff.

[29] Stevens Henager College, *op. cit.*, p. 22ff.

SUMMARY

A review of the admission requirements, tuition charges, and curricular offerings of the public and private institutions of the Salt Lake Metropolitan Area makes it possible to assess the post-high school educational opportunities available to high school graduates in this locality.

Admission Requirements: The admission requirements of the two public and four private post-high school institutions can be summarized as "liberal" and as such probably do not exclude any sizable number of potential students. The admission requirements range from the "open door" policy, in the instance of Salt Lake Trade Technical Institute, LDS Business College, Stevens Henager College and Weltech College to the somewhat selective admission requirements of the University of Utah and Westminster College. Thus, in the former institutions admission is open to all, while in the latter institutions some selection obtains, though the selection cannot be considered highly restrictive.

The University of Utah is faced with the difficult problem of maintaining high academic standards while at the same time providing educational opportunities, which it does through its liberal admission requirements, for many high school graduates whose chance to succeed in university work is highly questionable. In view of the limited public post-high school educational opportunities in the Salt Lake area, the University of Utah cannot move to a highly selective admissions policy, since to do so would limit or otherwise close available educational opportunities for many students. If other post-high school educational facilities are established in the Salt Lake area the University could advance toward a more selective admissions policy.

Tuition Charges: A summary of the tuition charges of the public and private institutions in the Salt Lake area are found in Table XVII. The information presented confirms the fact that private education is more expensive for the student than public education. It would seem that the high tuition charges made by private institutions serve as a greater limiting factor than do admission requirements in assessing post-high school educational opportunities.

Tuition charges in the two public post-high school institutions in Salt Lake range from $75.00 at Salt Lake Trade Technical Institute to $300.00 at the University of Utah. Such charges seem reasonable, though it would be difficult to determine the number of students whose parents find it difficult to meet the expenses of an education at the University of Utah. Furthermore, tuition increases at the University are imminent.

The tuition charges of the private institutions in the

Salt Lake Metropolitan Area serve to restrict educational opportunities to those students able to afford such charges. The more reasonable fees of the public institutions bring post-high school educational opportunities within the range of most students and their parents. In order to realize greater educational opportunities beyond high school, tuition charges must be maintained at a reasonable level.

Curricular Offerings. A review of the curricular offerings in the institutions under study reveals a concentration in the following areas: professional and liberal arts, business, and trade and technical. The University of Utah and Westminster College offer the student educational opportunities in the professional, pre-professional and the liberal arts. The LDS Business College and Stevens Henager College, both junior colleges of business, have limited their offerings to business and related areas of study. The Salt Lake Trade Technical Institute and Weltech College concentrate on trade and technical offerings.

In addition to the regular professional and liberal arts offerings, the University of Utah offers two-year diploma programs in a limited number of semi-professional areas and in some technical areas. Because of the "liberal" admissions requirements, the University must also offer remedial instruction for those students in need of improving certain basic skills required in university work. Such should not be the responsibility of the University, yet there are no other educational facilities available to provide this kind of service.

This summary of curricular offerings makes one point clear: that between the professional education available through the University of Utah and Westminster College on the one hand, and the trade and technical training offered by Salt Lake Trade Technical Institute on the other, there are a great number of occupations for which there is no educational preparation available in the Salt Lake area. The choice of the student is thus limited to deciding between professional education or trade and technical training. High school graduates do not divide themselves into two discrete groups, one headed for trade and technical training and the other for university training. It must be remembered that students change their objective and goals, depending largely on their academic success in the course of training. For the student enrolled in the University of Utah who finds the rigors of academic life unsuited to his abilities or interests, the alternatives left open to him are to change to another academic field with similar academic demands, or withdraw from the University. The latter course is generally followed by students admitted to the University on probation.

The highly specialized nature of the education and training offered by the University of Utah and Salt Lake Trade Technical Institute serves to limit and restrict the educational opportunities which are available to high school graduates.

Though admission requirements of the post-high school institutions would seem to provide educational opportunities for most high school graduates, the tuition charges of the private institutions and perhaps that of the University of Utah, coupled with the specialized nature of the curriculums in the professional and trade-technical areas serve to limit those opportunities.

RECOMMENDATIONS

It is recommended that:

1. A two-year junior college be established in the Salt Lake Metropolitan Area, and that the admission policy of the institution provide for the admission of any person over eighteen years of age, that tuition charges be as low as possible consistent with the State's ability to finance higher education, and that the curricular offerings include university-parallel courses, remedial programs, and a wide range of occupational training programs

not presently offered by either the University of Utah or Salt Lake Trade Technical Institute.

2. The control and development of the proposed junior college be vested in a state-level educational agency or board.

CHAPTER V

OCCUPATIONAL OPPORTUNITIES

INTRODUCTION

One of the "accepted purposes" of the junior college, as described earlier in this study, is that of providing a variety of occupational training programs for students whose primary interest is in learning certain skills and knowledge which will prepare them for immediate employment. The junior college occupational program is organized and based on a comprehensive occupational survey of the needs of the area to be served. The occupational survey provides the junior college administrator with essential information on which to base occupational offerings which reflect the needs of business, industry and government, as well as the interests and abilities of students.

The Utah Department of Employment Security has prepared several reports which identify the immediate and projected needs of business and industry in Utah and the Salt Lake Metropolitan Area. A report of special interest, "Utah Entry Occupations Survey of High School Graduates," identifies the occupational goals of high school graduates (classes of 1953, 1955, and 1957) and, through a follow-up survey, reports on the subsequent realization or attainment of those occupational goals. Through the reports of the Utah Department of

Employment Security it is possible to identify the occupational interests of high school graduates, determine the employment opportunities available to high school graduates, and to determine the needs and demands of various occupations requiring trained workers.

The previous section of this study identifies the educational opportunities available to high school graduates in the Salt Lake Metropolitan Area through public and private post-high school educational institutions. The present section evaluates the occupational opportunities available to high school graduates and assesses the extent to which educational opportunities will enable high school graduates to prepare for occupational opportunities in the Salt Lake Metropolitan Area.

Occupational Goals of High School Graduates. Table XVIII, A Comparison of High School Occupational Goals and Employment Obtained Following Graduation from High School, identifies the occupational goals of high school graduates and subsequent employment obtained following high school. From the information presented it is clear that professional and managerial occupations are the goals of a substantial majority (78.2 per cent) of the high school graduates. Next in importance, clerical occupations are selected as the choice of 11.9 per cent of the graduates. Sales, service,

TABLE XVIII

A COMPARISON OF HIGH SCHOOL OCCUPATIONAL GOALS AND EMPLOYMENT OBTAINED FOLLOWING GRADUATION FROM HIGH SCHOOL

	Occupational Goals of High School Graduates				Description of Jobs Held Since Graduation from High School			
Occupation	Total	Total Per Cent	Per Cent Men	Per Cent Women	Total	Total Per Cent	Per Cent Men	Per Cent Women
Professional & Managerial	850	78.2	86.2	68.0	159	6.0	4.9	7.1
Clerical	130	11.9	0.8	25.4	954	36.2	10.3	63.3
Sales	6	0.5	0.8	0.1	199	7.6	7.9	7.1
Service	37	3.4	1.2	6.5	423	16.1	13.5	18.8
Agriculture	14	1.3	2.4	-	69	2.7	5.0	0.1
Skilled	51	4.7	8.6	-	114	4.3	8.3	0.2
Semi-skilled	-	-	-	-	295	11.2	20.9	0.1
Unskilled	-	-	-	-	421	15.9	29.2	2.3
TOTAL	1,088	100.0	100.0	100.0	2,634	100.0	100.0	100.0
NUMBER		1,088	593	495		2,634	1,347	1,287

SOURCE: "Utah Entry Occupations Survey of High School Graduates 1953, 1955, 1957," Utah Department of Employment Security, April, 1959.

agriculture, and skilled occupations are selected by only 10 per cent of the graduates. It is interesting to note that not one of the students surveyed in the study selected either semi-skilled or unskilled occupations.

Among the men, professional and managerial occupations are the choice of 86.2 per cent, with skilled occupations second in importance, but selected by only 8.6 per cent of the graduates. Women graduates prefer professional and managerial occupations (68.0 per cent) with clerical occupations, second in importance, chosen by 25.4 per cent. Women high school graduates limit their choices to professional and managerial, clerical, sales, and service occupations.

Table XVIII also identifies the entry occupations and positions obtained by the high school graduates. The entry occupations of the high school graduates do not correlate with the occupational goals selected by the graduates. For example, while 78.2 per cent of the graduates indicate a preference for professional and managerial positions, only 6.0 per cent actually find employment in such positions. Most of the graduates find employment in clerical occupations (36.2 per cent) with service (16.1), semi-skilled (11.2), and unskilled (15.9) grouped close together. It is significant to note that 27.1 per cent of the graduates enter the semi-skilled and unskilled occupations, though not one graduate made such a selection as an occupational goal.

One-half of the men (50.1 per cent) find employment in semi-skilled and unskilled occupations, though none had made these choices as occupational goals. Next in importance follow clerical (10.3 per cent) and service (13.5 per cent) occupations. Among the women, 63.3 per cent find employment in clerical occupations. Following in importance are service (18.8 per cent) and professional and managerial, and sales occupations with 7.1 per cent of the women finding employment in these occupations.

Two observations can be made concerning the seeming inability of high school graduates to attain the occupational goal of their choice:

(1) That employment opportunities are limited and therefore high school graduates are being forced into other occupations where there is a need for workers. This observation cannot be supported by available information concerning the immediate and projected needs of government, business, and industry in Utah.

(2) That high school education and training is not sufficient, and that in many instances such training simply does not exist for many occupations and, therefore, high school graduates are forced to settle for employment in occupations not of their choice. There is substantial support for this observation in view of the fact that many positions require more than high school preparation as a basis for employment. The proceedings of the Occupational Outlook Conference support this latter view in the following statement:

> "The things that amazed us, were comments from these personnel managers (of principal Utah industries) to the effect that they did not generally desire our high school graduates and they fully did not desire the drop-out. They encouraged us and asked us to send the high school graduates on for two years or one year at least of post-high school education before sending them into the labor market."[30]

It would appear that "the single greatest barrier which most young people will face is an inadequate education and training to obtain and hold jobs in the labor force."[31] The resistance of employers in hiring the high school drop-out stems from his lack of training and education, but also from the employers' opinion of the drop-out's immaturity and lack of dependability.

It should also be pointed out that the "age of employability has been gradually increasing, that greater maturity is required in age and judgment for what is essentially an adults' world of work."[32] This trend suggests that for employment positions in many occupations high school training and education is no longer sufficient. The junior college offers the high school graduate an opportunity to obtain the needed education, training, and maturity -- all of which are being demanded by employers. Also, of considerable importance is the opportunity which the junior college affords the high school drop-out to take up his education and training and thus prepare for employment in an occupation consistent with his abilities and interests.

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[30] Call, J. Reed, "Preparing for Tomorrow's Jobs," Proceedings of Utah's Fourth Occupational Outlook Conference, Utah Department of Employment Security, March, 1964, p.22.

[31] Robson, R. Thayne, "Why Can't Johnny Get a Job?", Ibid., p. 19.

[32] Bogue, Jesse, The Community College, New York: McGraw-Hill Book Company, 1950.

That there is little correlation between the occupational goals of high school graduates and the employment which they are able to obtain is obvious. The education and training of the high school graduate limits his choice of an occupation to the semi-skilled and unskilled areas. The growing insistence of employers for additional education and training is making the matter of obtaining suitable employment a problem of considerable concern to an increasing number of high school graduates.

Occupational Opportunities. Table XIX, Occupational Groups as a Per Cent of Utah's Employed Labor Force, presents information which describes the distribution of occupational groups in Utah's labor force. For the period, 1950-1970, the professional, technical, and managerial; clerical; and service occupations have shown a consistent growth, while sales, skilled, semi-skilled, unskilled and agricultural occupations have shown a decrease. The information presented suggests that the best opportunities for employment are to be found in the professional, technical, and managerial;

clerical; service; skilled; and semi-skilled occupations. Unskilled, agricultural, and sales offer the least prospect for employment.

TABLE XIX

OCCUPATIONAL GROUPS AS A PER CENT OF UTAH'S EMPLOYED LABOR FORCE

Occupations	1950	1960	1970
Professional, Technical, and Managerial	19.5	22.5	23.9+
Clerical	13.1	15.6	19.0+
Sales	7.5	7.0	6.3-
Service	8.9	10.4	12.2+
Skilled	15.9	15.6	14.6-
Semi-skilled	15.9	14.9	13.9-
Unskilled	5.9	4.8	3.9-
Agricultural	12.1	5.4	3.0-

SOURCE: "Occupational and Cultural Needs," Utah Coordinating Council of Higher Education, Salt Lake City, July, 1962.

Table XX, Anticipated Occupational Changes in Non-Agricultural Jobs in Utah, 1963-1970, presents information relating to anticipated occupational changes in employment for the period, 1963-1970. From Table XX it is evident that the greatest increases in the number of positions available will occur in the professional, clerical, and service occupations, where the total number of positions will increase by 36,500. On a percentage basis, the greatest increase (53.9 per cent) will take place in the semi-professional occupations. Other significant increases will occur in the professional (36.8 per cent), sales (33.2), service (32.0 per cent), and managerial (27.2 per cent) occupations. The lowest increase will be in the semi-skilled occupations (6.3 per cent), while the unskilled occupations will decrease by 13.9 per cent.

TABLE XX

ANTICIPATED OCCUPATIONAL CHANGES IN NON-AGRICULTURAL[*] JOBS IN UTAH, 1963-1970

Occupations	1963	1970	Increase	Per Cent Increase
Professional	33,400	45,700	12,300	36.8
Semi-professional	10,800	16,400	5,600	53.9
Managerial	19,500	24,800	5,300	27.2
Clerical	56,400	70,300	13,900	24.7
Sales	21,700	28,900	7,200	33.2
Service	32,300	42,600	10,300	32.0
Skilled	58,400	65,600	7,200	12.4
Semi-skilled	33,500	35,600	2,100	6.3
Unskilled	27,300	23,500	-3,800	-13.9
Other	1,400	1,600	200	14.3
TOTALS	294,700	355,000	60,300	20.5

SOURCE: Utah Department of Employment Security.
Note: This table includes wage and salaried positions for employees only.

[*] See Appendix for a description of occupations.

Industrial changes are forecasted in Table XXI, Anticipated Industrial Changes in Non-Agricultural Jobs in Utah, 1963-1970. The greatest increases in the number of positions will occur in the service, trade, government, and manufacturing industries of Utah. On a percentage basis, service industries will realize an increase of 43.7 per cent. Finance, insurance, and real estate (28.0 per cent), trade (24.6 per cent), and government (20.0 per cent) will realize substantial increases in the next seven-year period. Mining as well as transportation, communications, and utilities will experience a decrease in positions during the 1963-1970 period.

TABLE XXI

ANTICIPATED INDUSTRIAL CHANGES IN NON-AGRICULTURAL JOBS IN UTAH, 1963-1970

Industry	1963	1970	Increase	% Increase
Manufacturing	54,900	64,000	9,100	16.4
Mining	11,900	11,000	- 900	-7.6
Construction	17,500	20,000	2,500	14.3
Transportation, Comm., & Utilities	21,800	21,000	- 800	-3.7
Trade	65,000	81,000	16,000	24.6
Finance, Insurance, & Real Estate	12,500	16,000	3,500	28.0
Service	38,900	56,000	17,100	43.7
Government	71,600	86,000	14,400	20.0
TOTALS	294,700	355,000	60,300	20.5

SOURCE: Utah Department of Employment Security

The information presented in Tables XX and XXI identifies both the variety of occupations and industries and the anticipated changes for the period 1963-1970. The anticipated changes suggest areas of employment opportunities as well as the need of business, government, and industry for trained workers in the labor force.

Table XXII, Utah Occupational Outlook, Men and Women, 1960-1970, presents a clearer picture of the occupational opportunities for men and women. Among the positions available to men, the greatest increases will be found in the professional and technical, skilled (craftsmen), semi-skilled (operatives), managerial, and service occupations. Unskilled and agricultural occupations will offer little or no opportunity. On a percentage basis, the following occupations will experience the greatest increases: professional and technical (49.3 per cent), service (49.1 per cent), managerial (28.0 per cent), skilled (26.6 per cent), semi-skilled (25.0 per cent), and clerical (23.3 per cent).

The occupational outlook for women is brightest in the service, clerical, secretarial, and professional and technical occupations. On a percentage basis, the following occupations for women will experience the most significant increases: secretarial (91.7 per cent), service (85.0 per cent), clerical (81.4 per cent), and the professional and technical and skilled (66.7 per cent each).

TABLE XXII

UTAH OCCUPATIONAL OUTLOOK, MEN AND WOMEN, 1960-1970

	Men		Women	
Occupations	New Jobs	Per Cent Increase	New Jobs	Per Cent Increase
Professional and Technical	13,000	49.3	9,000	66.7
Skilled (Craftsmen)	12,000	26.6	1,000	66.7
Semi-skilled (Operatives)	9,000	25.0	3,000	37.0
Managers, Officials	7,000	28.0	1,000	38.9
Service	6,000	49.1	17,000	85.0
Clerical	3,000	23.3	17,000	81.4
Sales	3,000	18.5	2,000	29.9
Unskilled	1,000	5.6	-	-
Agriculture	-3,000	-17.7	-	-
Secretarial	-	-	11,000	91.7
TOTALS	54,000	-	61,000	-

SOURCE: Utah Department of Employment Security

Note: This table includes all employed persons (employees, employers and self-employed).

SUMMARY

Entry into most governmental, business, and industrial positions requires prior educational preparation and training. The education and training which students receive in high school is no longer considered adequate for entry into an increasing number of occupations. The principal employers in the Salt Lake area "do not generally desire the high school graduate and they fully do not desire the drop-out."[33] The employers strongly urge "two years or one year at least of post-high school education before sending students into the labor market."[34] Thus it is, that many occupational opportunities require more than high school preparation.

The study of high school graduates by the Utah Department of Employment Security indicates that most high school graduates set occupational goals which they cannot hope to achieve. For example, the study reports that 78.2 per cent of the graduates surveyed choose occupations in the professional and managerial field, but only 6 per cent of the graduates are able to find employment in this occupational area. On the other hand, none of the graduates select occupations in the semi-skilled or unskilled areas, yet 27.1

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[33] Call, J. Reed, *op. cit.*

[34] *Ibid.*

per cent (the percentage for men is 50.1) of the graduates accept employment in these occupational areas. The study makes clear that high school preparation is not sufficient for entry into many occupations and that additional training beyond high school is necessary.

When viewing the various occupational groups which form Utah's employed labor force, those which will continue to increase through 1970 and occupy a significant position in the labor force are professional, technical and managerial; clerical; and services. Slight decreases are noted in the sales, skilled, semi-skilled, unskilled, and agricultural occupations.

The anticipated occupational changes expected to take place by 1970 suggest that for wage and salaried employees the greatest increases in positions will occur in the following occupations: semi-professional, professional, sales, services, managerial, and clerical positions. Semi-skilled positions will increase only slightly (6.3 per cent), while in the unskilled occupations there will be 3800 fewer jobs than in 1960.

Significant opportunities for employment will occur in the following industries: service, trade, government and manufacturing. Mining as well as transportation, commerce and utilities will offer little opportunity for employment.

The occupational outlook for Utah during 1960-1970, including all employed persons, indicates differing employment opportunities for men and women. For men, the greatest number of opportunities will occur in the professional, skilled (craftsman), semi-skilled (operatives), and managerial occupations. For women, the best opportunities will occur in the service, clerical, secretarial, and professional and technical occupations.

The foregoing information suggests areas in which post-high school institutions should provide training. It should be noted that insufficient training is currently provided by Salt Lake area post-high school institutions for those occupations in which the opportunities for employment are greatest.

Two significant factors become obvious: (1) that there is a wide range of occupations for which little or no post-high school training is being offered currently and (2) the demands of government, business, and industry are such that a high school education is inadequate as preparation for many occupations.

RECOMMENDATIONS

It is recommended that:

1. The proposed junior college provide a wide range of occupational programs based on periodic occu-

pational surveys of the Salt Lake Metropolitan Area.

2. The proposed junior college provide courses in general education to complement courses in the occupational area.

3. An occupational survey of the Salt Lake Metropolitan Area be made in order to ascertain the nature and extent of curricular offerings in the occupational area and thus provide a basis for determining the kind of building program which will be required.

CHAPTER VI

LOCATION OF THE CAMPUS

POSSIBLE CAMPUS SITES: THE PROBLEM

A preliminary review of potential campus sites for the proposed junior college is included as part of the junior college study. Consideration of possible sites in Salt Lake County includes attention to geographical location, accessibility, transportation, population centers, acreage of available sites, and current land values.

It should be noted here that the Utah State Department of Public Instruction presently has acquired a site at 4600 South and Redwood Road for the future development of Salt Lake Trade Technical Institute. The feasibility of this site for the proposed junior college will be considered later in this section of the study.

The assistance of the Salt Lake County Planning Commission was sought in view of the Commission's development of a master plan for the County. In developing the master plan, the Salt Lake County Planning Commission has identified certain areas in the County as "planning districts." These "districts" were established for the purpose of planning the future development of the County. Seven "planning districts" were established as follows: Salt Lake City, Big Cottonwood, Little Cottonwood, Draper, Jordan, Valley, and Northwest.

Consideration of possible campus sites was based on the available land and the population in each of the "planning districts."

Table XXIII, Population of Salt Lake County Planning Districts, 1960 & 1985, reports population statistics and population growth rates.

TABLE XXIII

POPULATION OF SALT LAKE COUNTY PLANNING DISTRICTS,
1960 and 1985

Planning District	1960	1985	Per Cent Increase
Salt Lake City	189,454	242,115	27.8
Big Cottonwood	104,476	241,286	113.8
Little Cottonwood	26,381	118,379	350.0
Valley	38,431	138,431	260.2
Jordan	10,031	19,531	95.0
Draper	5,308	10,308	94.5
Northwest	8,954	18,954	111.9
TOTAL	383,035	789,004	106.1

SOURCE: Salt Lake County Planning Commission

The Big Cottonwood, Little Cottonwood, and Valley districts will experience the greatest increase in population and rate of growth. Big Cottonwood will approximate the Salt Lake City district in population by 1985, and the districts of Little Cottonwood and Valley will approximate each other in population, with the Little Cottonwood district experiencing the greatest rate of growth. The growth in population, beginning in Salt Lake City proper, is expanding southward along the eastern side of Salt Lake Valley, through Big Cottonwood into the Little Cottonwood district. On the west side of Salt Lake Valley, the greatest increase will occur in the Valley district, in the Granger-Kearns area.

Population growth expected in the planning districts directly affects the availability and value of land. For example, the rapid population increases in the Big Cottonwood district virtually eliminate any choice in the selection of campus sites in the area. The scarcity of large plots is due to the construction of numerous housing developments, resulting in sharp increases in land values. The staff of the Planning Commission is of the opinion that only one site, suitable and of sufficient acreage (100 acres), is available in the Big Cottonwood district.

In view of the rapid and substantial population increases, it is expedient to assess each of the districts as to the availability of suitable sites for the proposed junior college. It must be remembered that the proposed junior college will serve the Salt Lake Metropolitan Area, which includes Salt Lake County and southern Davis County, with an estimated total population of approximately one million persons by 1985. The master plan of the Salt Lake County Planning Commission proposes the establishment of a junior college in each of the following districts: Big Cottonwood, Little Cottonwood, and Valley. The following information assesses each of the three districts as follows:

Big Cottonwood. This district is experiencing a rapid increase in population, and available sites of sufficient acreage for the proposed junior college are difficult to locate. One site of approximately 100 acres, located on 4500 South between Highland Drive and 1300 East would cost approximately $800,000 to $1,000,000. The increasing demand for land for residential housing will result in a corresponding increase in land values.

Little Cottonwood. This district will increase in population to 118,000 by 1985. The County master plan provides for a second institution in this area. There are several available sites suitable in size and location for a junior college. One site located at 8000 South and 2000 East, would cost approximately $600,000 under present sale conditions. Land values vary depending on the availability of land and the demand for residential housing which accompanies population increases.

Valley. As noted earlier, the Utah State Department of Public Instruction has acquired property located at 4600 South and Redwood Road. The property, a 72 acre site, was purchased for $200,000. The 72 acre site was obtained at a price of approximately $2780 per acre and a subsequent parcel of six acres was obtained at a price of $5820 per acre. The 78 acre site would appear to be a satisfactory site, though somewhat less than the 100 acres recommended for junior college sites.

The Redwood Road site is satisfactory from the standpoint of location, though removed from population centers. It is accessible to southern Davis County. Its accessibility in the Salt Lake area will increase with the completion of the proposed "Belt Route" and Interstate 15. Additional acreage is available adjoining the present site and land values are somewhat below those in the Big and Little Cottonwood areas.

Two other planning districts, Draper and Jordan, will remain predominately agricultural and will experience little increase in population. The Northwest district will remain industrial in character with a predicted population in 1985 of approximately 19,000.

Salt Lake City will experience an increase of 27.8 per cent by 1985 and, though a center of population, suitable sites for a junior college campus are not readily available. Land values in this district would be prohibitive should the state move to acquire property. The recent decision of the federal government to close Fort Douglas has resulted in a number of organizations "staking a claim" to property which the federal government may be willing to release. Evidently there would be sufficient land for an adequate site on the Fort Douglas reservation; however, the accessibility of such a campus site to southern Davis and southern Salt Lake County residents would serve to further complicate an already serious traffic problem.

SUMMARY

The rapid increases in population growth predicted for sections of Salt Lake County will result in expanding residential developments, thereby complicating the acquisition of useable sites for a junior college. At the present time, suitable sites are available in areas where the population increase is greatest. The scarcity of available sites for junior college development will increase as residential developments are expanded to meet the demands of an expanding population.

The site on Redwood Road, acquired for the development of Salt Lake Trade Technical Institute, is adequate at present but would probably need to be expanded if utilized as a junior college site.

RECOMMENDATIONS

It is recommended that:

1. The present site on Redwood Road be utilized for the proposed junior college campus.
2. Approximately 40 to 50 additional acres be acquired, adjoining the present Redwood Road site, for the future growth of the proposed junior college.
3. A second campus site be acquired later on the east side of Salt Lake Valley in either the Big Cottonwood or Little Cottonwood planning districts in anticipation of the future projected growth in population and school enrollments.

CHAPTER VII

ENROLLMENT POTENTIAL

ESTIMATED STUDENT ENROLLMENT OF THE PROPOSED JUNIOR COLLEGE

The matter of predicting student enrollment in newly-organized junior colleges is complicated by two factors: (1) there is little agreement as to the best method of predicting enrollments for a new institution, and (2) there are many factors which affect the number of prospective junior college students.

Several methods have been used to predict student enrollments in newly-organized junior colleges. The methods are described and utilized to predict the student enrollment of the proposed junior college. In general, these methods are based on the number of high school graduates, the general population, or total high school enrollment.

Predicting initial freshman enrollment of the proposed junior college on the basis of the number of high school graduates allows for approximately one-third of the number of high school graduates to enroll in junior college. In 1964, there were 4,979 high school graduates in Salt Lake County. On the basis of the one-third ratio, the proposed junior college in the Salt Lake area could expect a fall 1964 enrollment of approximately 1,660 students and in 1965, approximately 2,163 students could be expected to enroll. As the number of high school graduates in Salt Lake County will average 6,260 over the ensuing five years, the number of students which could be expected to enroll in the proposed junior college would be approximately 2,000. This figure includes Salt Lake County high school graduates only, and would be higher if graduates from southern Davis County were included.

It should be noted that in a few instances, one-half of the number of high school graduates has been used as a basis for predicting initial junior college enrollment. By this standard, the initial enrollment in the proposed junior college would be approximately 3,200 students.

The Washington State Board of Education--the state agency responsible for approving the establishment of junior colleges in that state--has determined that:

> "in actual practice, a figure equivalent to 65 per cent of the number of high school graduates within 25 miles (of a proposed junior college) will approximate, within two years of the commencement of operations, the size of the full-time equivalent student body."[35]

Further, the Board asserts that experience has indicated this estimate (65 per cent after two years of operation) has a "margin of error of less than 1 per cent."[36] On this basis, the proposed Salt Lake area junior college could expect a total freshman and sophomore enrollment of approximately 4,000 students during the period, 1966-1970.

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[35] Seattle-King County Municipal League Public Schools Committee, Subcommittee to Study the Establishment of a Community College in Seattle, Seattle-King County Municipal League. Seattle, Septmeber, 1964, p. 8.

[36] Ibid.

A doctoral dissertation, completed in 1954 by Dr.George C. Kimber of Sacramento Junior College, entitled "The Development of Criteria for the Establishment of Junior Colleges in California" contains provisions for estimating potential junior college enrollments. Dr. Kimber estimated that approximately "2,464 of each 100,000 persons in Sacramento are potential junior college enrollees." Using this method and estimating the general population of Salt Lake County at 440,000 for 1964, produces a potential junior college enrollment of 10,840. On the assumption that 50 per cent of the potential students actually enroll, the proposed junior college would anticipate a total enrollment of 5,400 students. Further application of this method produces a potential junior college group of 13,059 by 1970 and an actual total enrollment of approximately 6,530 students. If the population of the Salt Lake Metropolitan Area is used, then enrollment figures will approximate 6,000 in 1965 and 7,145 by 1970.

The method which utilizes high school enrollments as a basis for predicting junior college enrollments has been used in Florida, California, and by the Southern Regional

Education Board. This method uses total eleventh and twelfth grade enrollments or total tenth, eleventh, and twelfth grade enrollments.

Application of the former method (eleventh and twelfth grades), and using Salt Lake County high school enrollments which totaled 14,687 in 1963-64, produces a high estimate (based on one-half of the students enrolled in the two grades) of 7,343 students and a low estimate (based on one-third of the students enrolled in the two grades) of 4,894. These figures are total enrollments including freshman and sophomore students.

A variation of the above described method utilizes the total enrollments of grades ten, eleven, and twelve. These data amount to 22,225 students for Salt Lake County in 1963. Predictions based on one-third of this number produce a total enrollment for the proposed junior college of 7,400 students.

Table XXIV summarizes the enrollments predicted for the proposed Salt Lake area junior college based on the methods described.

TABLE XXIV

PREDICTED STUDENT ENROLLMENTS FOR THE PROPOSED SALT LAKE AREA JUNIOR COLLEGE UTILIZING VARIOUS PREDICTIVE METHODS

Based on the Number of High School Graduates	Freshman Junior College Enrollment	Total Junior College Enrollment[3]
1970 - 6,850[1] graduates	2,193	4,277
1970 - 7,955[2] graduates	2,652	5,170
1965 - 6,490 graduates	2,163	4,220
Based on the General Population-Salt Lake County		
1970 - 521,800 population	-	6,529
1965 - 450,000 population	-	5,544
Based on the General Population - Salt Lake Metropolitan Area		
1970 - 581,300	-	7,145
1965 - 492,400	-	6,037
Based on High School Enrollment - Grades 11 and 12		
1963-64 - 14,687 enrollment		7,343 (high) - 4,894 (low)
Based on High School Enrollment - Grades 10, 11, and 12		
1963-64 - 22,225 enrollment	-	7,408

(1) Prediction of Utah State Department of Public Instruction.
(2) Prediction of Utah Coordinating Council of Higher Education.
(3) After two years of operation.

The following Table shows potential student enrollments of the proposed junior college. The estimates are conservative and should be considered as minimum enrollments.

TABLE XXV

ESTIMATED STUDENT ENROLLMENTS OF THE PROPOSED SALT LAKE AREA JUNIOR COLLEGE

Year Graduated	Number of Graduates	Estimated Initial Junior College Enrollment[1]	Estimated Enrollment Within Two Years of the Commencement of Operation[2]
1970	6,580	2,190 R=1900-2400	4,150
1969	6,380	2,130 R=1800-2300	4,000
1968	6,190	2,060 R=1800-2250	3,900
1967	5,887	1,960 R=1700-2150	4,050
1966	6,225	2,085 R=1800-2200	4,200
1965	6,441	2,150 R=1800-2300	-

SOURCE: Utah State Department of Public Instruction.

(1) Estimates are based on 33 per cent of total number of high school graduates enrolling in junior college.

(2) Estimates are based on 65 per cent of total number of high school graduates enrolling in junior college.

As noted previously, there are various factors which relate directly to predicted enrollments for the proposed junior college in the Salt Lake area.

1. Population increases. It has been pointed out previously that population increases are reflected in enrollment

increases. If predictions concerning population increases for the Salt Lake Metropolitan Area prove to be conservative, then predicted enrollments as they pertain to post-high school institutions, including the proposed junior college, will be conservative. Increases in population beyond those predicted will result in increases in school enrollments.

2. Expanded curriculum offered by the proposed junior college. Enrollment predictions will undoubtedly be affected by an expanded curriculum. Once an occupational program is established, providing broad and varied offerings, it is quite likely that many students, who heretofore terminated their education upon graduation from high school, would continue in a junior college program which provided variety in educational programs.

3. Economic conditions in the Salt Lake Metropolitan Area. The dependence of several industries in the Salt Lake area on governmental contracts can directly affect school enrollments. Termination of government contracts or increased demands by the government for various products will be reflected in school enrollments. In addition, the demand by employers for trained personnel will affect enrollment in the proposed junior college.

4. Lower division offerings at the University of Utah. Presently, the lower division offerings at the University of

Utah are limited, in general, to professional and preprofessional training. Should steps be taken by the University to broaden or curtail lower-division offerings, such action would affect the enrollment of the proposed junior college.

5. Changes in the admission policy at the University of Utah. The present policies regarding admission to the University of Utah may be described as "liberal." With the establishment of the proposed junior college it is quite likely that the University will consider a more selective admissions policy. It should be noted that Brigham Young University recently announced intentions to adopt a more selective policy which will directly affect a number of students in the Salt Lake area. Should the University of Utah move in the same direction, as would seem likely, there will be a direct effect on junior college enrollment.

6. Changes in tuition charges currently in effect at the University of Utah. Student ernollment is affected by the amount of tuition charged for admission. As the University has just increased its resident tuition for 1965-66 to $375.00 per year, there may be some reduction in the potential freshman University enrollment. If the proposed junior college were established and its tuition charges were comparatively low, its enrollment potential would be enhanced.

SUMMARY

The various methods of predicting student enrollment in newly-organized junior colleges are described in this section. Each of the methods is applied to the Salt Lake area, using appropriate statistics regarding the number of high school graduates, general population statistics, and high school enrollments.

In general, the predictive method based upon the number of high school graduates yields the most conservative estimates. This method shows total enrollment of the proposed junior college may vary from 4,277 to 5,170 students for 1970, depending on predictions as to the number of high school graduates. The figure for 1965 would be 4,220. Predictions of freshman enrollment for the proposed junior college vary from 2,193 to 2,652, again depending on the estimates of the number of high school graduates. The freshman enrollment for 1965 would be approximately 2,160 students.

The method based upon general population statistics, places total student enrollment at 6,529 by 1970. The comparable total enrollment figure for 1965 would be 5,544. Both enrollment predictions are based on the general population statistics for Salt Lake County. When using general population statistics for the Salt Lake Metropolitan Area, both figures increase approximately 500 to 600 students.

When total high school enrollments are used as a basis for predicting junior college enrollment, two alternative methods are possible. The first used the total enrollments of grades eleven and twelve. On this basis, the 1963-64 high estimate of enrollment would be 7,343 and the low estimate of enrollment would be 4,894. The second alternative uses the total enrollments of grades ten, eleven, and twelve. On this basis, the total enrollment of the junior college would approximate 7,408 students.

It should be noted that the "Building Plan" of the Salt Lake Trade Technical Institute provides for an enrollment capacity of 2,225 students at the completion of the building program in 1971. Thus, in 1970, when enrollment predictions indicate an approximate enrollment of 4,300 students for the proposed junior college, Trade Technical Institute will have an enrollment of 2,225 students. Should other enrollment predictions for the proposed junior college prove accurate, the junior college would enroll three times as many students as the Technical Institute. In view of these predictions, it is illogical to refrain from establishing a comprehensive junior college in deference to a technical institute which has a much more limited enrollment and curriculum.

As has been noted, various factors affect predictions concerning enrollments. Many of these factors in the Salt Lake area will very possibly serve to make most enrollment predictions conservative.

RECOMMENDATIONS

It is recommended that:

1. As soon as possible, the Utah Legislature appropriate $150,000 for the employment of an administrative staff by the designated state-level educational agency or board to undertake the planning and development of the proposed junior college.

CHAPTER VIII

JUNIOR COLLEGE COSTS

OPERATING COSTS

This section of the junior college study reports information relating to the cost of educating students in junior colleges, lower-division student costs in universities, and information concerning capital outlay expenditures for construction in both junior colleges and universities. The information reported herein is based on the experiences of several states in establishing junior college systems.

In reporting comparative data relating to operating costs and capital outlay expenditures in junior colleges and universities, one is tempted to make questionable comparisons. Adequate comparisons are possible only if the data reported are truly comparable. Comparability is difficult, however, because of variables such as the following:

1. The nature of courses offered by the junior college and the university, i.e., academic and occupational.
2. The size and number of classes offered by the junior college and the university.
3. The number of graduate assistants employed by the university to teach lower-division courses.
4. The obligation of junior colleges to teach courses, small in enrollment, which are prerequisite for

upper-division university courses, i.e., mathematics, science, and foreign language.

5. In determing lower-division costs, how does the university allocate administrative, departmental, institutional, library, and maintenance costs.
6. The academic training and experience of faculty members.
7. Faculty salaries.
8. The quality of instruction.
9. The different kinds of services provided the student, i.e., guidance services.
10. Teaching assignment (load) of faculty members.

The statistical data which follows emanates from various reports and studies conducted in several states. No attempt was made to analyze the factors involved to determine if the data are comparable.

Table XXVI, Instructional Salary Cost Per Student-Credit-Hour Produced During the 1963-1964 Academic Year, reports on the instructional cost per student-credit-hour for public post-high school institutions in Utah. As might be expected when all levels of instruction are considered, the University of Utah has the highest instructional costs while the two-year colleges are somewhat lower. However, when only lower-division instructional costs are considered, the University of Utah reports costs which are considerably less than those reported by the two-year institutions. The costs reported here are instructional salary costs per student-credit-hour, and do not include departmental or institutional administrative costs.

TABLE XXVI

INSTRUCTIONAL SALARY COST PER STUDENT-CREDIT-HOUR PRODUCED DURING THE 1963-1964 ACADEMIC YEAR

Institution	All Levels	Lower Division*
University of Utah	$9.92	$5.57
Utah State University	8.51	5.18
Weber State College	7.22	6.57
College of Southern Utah	7.76	6.89
Carbon College	8.00	8.00
Snow College	8.48	8.48
Dixie College	7.94	7.94

SOURCE: Utah Coordinating Council of Higher Education

*Does not include departmental and institutional administrative costs.

A comprehensive study of higher education in California reports data on lower-division student-credit-hour costs in California's junior colleges, state colleges, and the University of California. The data are presented in Table XXVII.

TABLE XXVII

COMPARISON OF LOWER-DIVISION STUDENT-CREDIT-HOUR COSTS IN CALIFORNIA JUNIOR COLLEGES, STATE COLLEGES AND THE UNIVERSITY OF CALIFORNIA, 1957-1958.[37]

Institution	Total Expense per Student-Credit-Hour[1]	Range
University of California (5)	$47.92	$29.53 - $71.94
State Colleges (10)	26.59	21.13 - 44.30
Junior Colleges (24)	26.40	20.63 - 43.38

SOURCE: California State Department of Education.

(1) Lower-division costs include teaching or instructional expenses (salaries) and departmental and institutional expenses.

Figures in parentheses indicate the number of institutions in study.

The information reported in the California study clearly indicates that when departmental and institutional expenses are added to instructional expenses in determining lower-division costs, the per student-credit-hour cost is substantially higher in the university than in the junior college.

An analysis of the data reported in the California study reveals the following percentage distribution of lower-division costs for instructional expense, departmental, and institutional expense for both the University of California and junior colleges included in the study.

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[37] A Master Plan for Higher Education in California, 1960-1975, California State Department of Education, Sacramento, California, pp. 156-157.

EXPENSES:	Instructional	Departmental	Institutional
U. of Calif.	25.8%	23.4%	50.8%
Junior Colleges	58.0%	N.A.	42.0%

Though instructional costs are lower at the university level, departmental and institutional expenses are higher. The inclusion of such costs makes lower-division costs at the university higher than that of the junior college.

Reports of operating costs per student in junior colleges are found in Table XXVIII, Operating Costs of Junior Colleges. These data are based on the cost to the institution for educating a student for one year.

TABLE XXVIII

OPERATING COSTS OF JUNIOR COLLEGES

State	Average Operating Costs
California	$587.00
Florida	355.00
Illinois	600.00
Washington	684.00
Southern Regional Education Board(1)	500.00
United States(2)	528.00

(1) Includes the following states: Oklahoma, Texas, Arkansas, Louisiana, Mississippi, Alabama, Georgia, Florida, Kentucky, Tennessee, North Carolina, South Carolina, Virginia, West Virginia, Maryland, and Delaware.

(2) Includes all states.

Operating costs in Utah's two-year colleges are somewhat above the figures reported in Table XXVIII, probably because of their small enrollments. For the 1963-64 school year the operating costs in Utah's two-year colleges were as follows: Carbon College, $732.60; Snow College, $817.65; and Dixie College, $859.35. Costs for universities usually run substantially higher. For example, for the same year the operating costs at the University of Utah were $1005.30 per student, but this figure applies to an average student in an institution offering expensive graduate programs. In the state of Illinois the per student operating cost is estimated to be between $800.00 and $1200.00 for lower-division students in the four-year institutions in the state.

CAPITAL OUTLAY

The following information relating to capital outlay expenditures permits some review of the cost of construction for university and junior college campuses, including the experiences of California, Illinois, and the Southern Regional Education Board. These data permit comparisons only in a general sense. They are included here only to indicate approximate capital outlay costs.

The initial cost of building a university campus is $5000 per student in Illinois and $7000 per student in California. Both Illinois and California, subjected to dramatic increases in student enrollments in higher education, have had considerable experience in university construction. These figures exclude dormitories which, if included, would increase the costs considerably.

The initial cost of building a junior college campus has been established at $2500 - $3000 in Illinois, $3200 in California, and $2500 - $4000 per student for member institutions of Southern Regional Education Board. These data suggest that junior college capital outlay costs are considerably below similar costs for university construction.

The master plan study in Illinois reported the following:

> "By 1971, when 95,000 more students will be in public colleges and universities than in 1965, the difference to the state in capital and operating costs between supporting commuter (junior college) institutions or residential (university) campuses can run into many millions of dollars. If all additional students attended commuter type junior colleges instead of state universities, the difference in capital costs would be over 60 million dollars per year by 1971."[38]

It is possible that California has recognized that similar economies are possible through junior college construction. At the present time in California new construction of university and state college campuses has been halted in localities which have not constructed adequate junior college facilities. The program of expanding junior colleges is designed to encompass the state and ultimately every high school district in the state must be included in a junior college district.

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[38] The Illinois Board of Higher Education, A Master Plan for Higher Education in Illinois, July, 1964.

The Master Plan in California includes data as to the estimated capital costs involved in building junior colleges.

ESTIMATED COSTS OF THE "TYPICAL" JUNIOR COLLEGE[39]

Campus size	1958 costs per student	Total costs
3000 students	$2140.00	$6,400,000
6000 students	1870.00	11,200,000
12000 students	1670.00	20,000,000

The costs reported here have increased, somewhat over the past five years. Information concerning the present costs of high school construction in the Salt Lake area are available, and provide some basis for understanding the cost of constructing educational facilities. It should be noted, however, that high school and junior college facilities differ in two major respects: (1) the size of the campus (acreage) and (2) the nature of the curricular offerings. In general, junior college campuses are three to four times the size of a high school campus and the broad and comprehensive nature of the junior college curriculum, when compared to the high school curriculum, is more expensive to house. The offering of occupational programs by the junior colleges increases capital outlay costs due in part, to the cost of equipment required in many occupational programs.

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[39] California State Department of Education, _op_. _cit_., p. 162.

In the Salt Lake area, three high school campuses have been completed recently. Skyline High School was erected at a cost of approximately four million dollars and was designed to accommodate 2600 students. Capital outlay costs per student for the construction of the campus was approximately $2280. Hillcrest High School was designed to house 1800 students and cost approximately $4,300,000. The cost per student at Hillcrest High School was estimated to be $2400. The campus at Highland High School (30 acres) was donated to the school district. The cost of construction at Highland was $5,390,000.

The proposed junior college in the Salt Lake area, because of the comprehensive nature of the curriculum and the acreage of the site, would cost more to build than the high schools cited.

The proposed "Building Plan" of Salt Lake Trade Technical Institute calls for theexpenditure of $10,689,469, which includes the cost of acquiring the present campus of 78 acres, the heating plant which has been completed, the recently approved administration building, and other facilities proposed for the future. The campus, when completed, will accommodate 2,225 students at a price of $4974.14 per student for capital outlay costs of construction.

SUMMARY

This section of the junior college study presents data relating to the cost of educating junior college students and capital outlay expenditures for construction. Similar data pertaining to four-year institutions are also included. Though data are reported for junior colleges and four-year institutions, the difficulty in comparing these data is noted.

In reporting instructional salary costs per student-credit-hour in Utah post-high school institutions, it appears that total costs at the University of Utah are higher than the same costs at two-year institutions; but in determining such costs at the lower-division level only, University costs are somewhat below those of the two-year colleges. This method of determining the cost of educating students, though widely used, does not include all expenses which should be charged to the cost of educating students.

The Master Plan Survey in California, which determined lower-division student-credit-hour costs, includes departmental and institutional expenses in addition to instructional salary costs. The application of this method results in substantially higher lower-division costs at the University of California than is true in the junior colleges.

Junior college operating costs (per student) in California, Florida, Illinois, and Washington, for the Southern Regional Education Board, and the United States are reported. The range in operating costs is from $355.00 (Florida) to $684.00 (Washington). The average operating cost among junior colleges in the United States is reported as $528.00. The costs reported here are somewhat below those for two-year colleges in Utah. The national data can be compared in general to similar operating costs in four-year institutions, which approximate $1,000.00 per student.

Data relating to capital outlay expenditures for construction suggest that junior colleges can be built at costs substantially below construction costs for four-year institutions. Information as to capital outlay expenditures (per student) for construction indicate that university construction varies between $5,000 and $7,000 (Illinois and California). Similar data pertaining to junior colleges seem to indicate the cost of construction varies between $2,500 and $4,000 (Southern Regional Education Board). Illinois reports a range of $2,500 to $3,000, and in California the cost of construction is placed at approximately $3,200.

It is noted that the "Building Plan" for the proposed campus of Salt Lake Trade Technical Institute calls for a total expenditure of $10,689,469, which includes the site and all buildings. The per student cost for capital outlay will approximate $5,000. Consideration should be given to the dilemma of expending such funds for an institution of limited enrollment, when a junior college of approximately 6,000 enrollment can be constructed for approximately $16,500,000.

in substantially higher lower-division costs at the University of California than is true in the junior colleges.

Junior college operating costs (per student) in California, Florida, Illinois, and Washington, for the Southern Regional Education Board, and the United States are reported. The range in operating costs is from $355.00 (Florida) to $684.00 (Washington). The average operating cost among junior colleges in the United States is reported as $528.00. The costs reported here are somewhat below those for two-year colleges in Utah. The national data can be compared in general to similar operating costs in four-year institutions, which approximate $1,000.00 per student.

Data relating to capital outlay expenditures for construction suggest that junior colleges can be built at costs substantially below construction costs for four-year institutions. Information as to capital outlay expenditures (per student) for construction indicate that university construction varies between $5,000 and $7,000 (Illinois and California). Similar data pertaining to junior colleges seem to indicate the cost of construction varies between $2,500 and $4,000 (Southern Regional Education Board). Illinois reports a range of $2,500 to $3,000, and in California the cost of construction is placed at approximately $3,200.

CHAPTER IX

ESTABLISHING THE PROPOSED JUNIOR COLLEGE: THE ALTERNATIVES

THE ALTERNATIVES

The need for a junior college in the Salt Lake Metropolitan Area is clear. It is appropriate at this point to direct attention to the various alternatives by which the proposed institution could be established. Three alternatives are suggested, each of which makes provision for the establishment of the proposed junior college under varying conditions and circumstances. The alternatives are examined, and statements, together with pertinent comments, in support of and in opposition to the alternatives are presented.

The alternatives relating to the establishment of the proposed junior college are as follows:

1. That the proposed junior college be established as a separate institution, independent of other educational institutions in the area. Under this alternative the proposed junior college would be a comprehensive institution, offering a broad and varied curriculum with the following educational programs: (1) transfer education; (2) general education; (3) occupational education; (4) adult education and community services; and (5) guidance services.

2. That the proposed junior college and Salt Lake Trade Technical Institute be established as separate institutions located on the same campus. Under this alternative the two institutions would be separate entities, with separate administrative organizations, faculties, facilities, and educational programs. There would be joint use of certain facilities such as the library, student union, bookstore, cafeteria, and physical education facilities.

3. That the proposed junior college and Salt Lake Trade Technical Institute be combined and that a single comprehensive institution be established. Under this alternative the existing educational and training programs of Salt Lake Trade Technical Institute would be combined with the educational programs offered by the junior college, thus making possible the establishment of a single institution with the five functions enumerated in alternative #1 above.

In assessing the three alternatives, herein proposed, the comments which accompany each of the alternatives are based on the assumption that the proposed junior college be a comprehensive institution, which will provide a broad and varied program of studies embracing the "accepted purposes" of the junior college, i.e., occupational, transfer, general and adult education. The proposed junior college would also provide services for the community and guidance services for students. Comments on the various alternatives are made from this point of reference.

The alternatives, any one of which would make possible the establishment of the proposed junior college, are assessed in the pages which follow.

ALTERNATIVE #1:

THAT THE PROPOSED JUNIOR COLLEGE BE ESTABLISHED AS A SEPARATE INSTITUTION, INDEPENDENT OF OTHER EDUCATIONAL INSTITUTIONS IN THE SALT LAKE METROPOLITAN AREA.

This alternative provides that the proposed junior college be established as a separate institution, independent of other educational institutions in the Salt Lake Metropolitan

Area. The proposed institution would be established on a separate campus, with its own faculty, facilities, administrative organization, and educational program. The administration would be responsible to a designated state agency or board. The distinct advantage here is in building a new institution "from the ground up," as it were, with no preset bounds or limitations, no traditions or established procedures to follow. The institution can be designed as a totally new and functional venture, designed to meet the needs of the students, adults, and the community which it serves.

The merit of this alternative is that the proposed junior college would be established as a community-oriented institution, offering courses of study consistent with the "accepted purposes" of the junior college. In so doing the institution would provide increased educational opportunities in the Salt Lake Metropolitan Area. Thus, in one institution would be found courses leading to immediate employment in a variety of occupations, and to transfer to a four-year institution. Courses leading to immediate employment would cover the wide range of occupations from semi-professional and technical education, on the one hand, to those requiring skilled training on the other. Preprofessional courses leading to transfer to four-year institutions, with junior class standing, would also be offered. The proposed junior college would also provide various community services, guidance services, and remedial instruction.

This alternative follows the recommendation of this study that a comprehensive junior college be established in the Salt Lake Metropolitan Area. Statements supporting this alternative are found in Chapter X of this study and will not be repeated here. It should be noted, however, that the establishment of the proposed junior college will provide educational opportunities in the Salt Lake Metropolitan Area where such opportunities are presently limited or do not exist.

There is, however, a significant disadvantage to this proposed alternative: the financial outlay of State monies for the acquisition of a separate campus site and for the construction of facilities to house the various educational programs and services of the proposed junior college.

The acquisition of a suitable campus site, centrally located to serve students of southern Davis County and Salt Lake County, would necessitate an expenditure of approximately $500,000 to $1,000,000 -- depending on location. The matter of site acquisition in Salt Lake County is treated in detail in Chapter VI of this study.

Capital outlay costs for the construction of facilities to house the educational programs and services of the proposed junior college, and to accommodate an estimated 4,000 students, would approximate $12,000,000. Thus, the total cost of the campus and facilities would approximate between $13,000,000 and $14,000,000. This sum of money would be in addition to funds presently allocated and planned for the construction of facilities for other state institutions in the Salt Lake Metropolitan Area. The feasibility of this alternative must be questioned on the basis of economy to the State. Any plan for the establishment of the proposed junior college must be economically sound and within the ability of the State to finance the acquisition of a campus and for construction.

ALTERNATIVE #2.

THAT THE PROPOSED JUNIOR COLLEGE BE ESTABLISHED ON THE SAME CAMPUS WITH THE SALT LAKE TRADE TECHNICAL INSTITUTE, WITH THE TWO INSTITUTIONS SHARING CERTAIN FACILITIES.

This alternative provides for the establishment of the proposed junior college with the Salt Lake Trade Technical Institute on the same campus but as separate institutions, each with its own administrative organization, faculty, facilities, and educational program. In the latter instance the proposed junior college would not duplicate the present trade, industrial and technical programs of Salt Lake Trade Technical Institute, but would offer occupational training in those fields where such training is not now offered. The two institutions would be located on the Redwood Road site, which is presently planned for the future development of Salt Lake Trade Technical Institute. The administrations of the two institutions would be responsible to a designated state agency or board.

The immediate advantage of this alternative is the economy to the State in the construction and development of one campus. The previous alternative would establish the proposed junior college as a separate institution and would not affect the planned development of Salt Lake Trade Technical Institute. Under the present alternative, the two institutions would be located on one campus. In addition, joint use would be made of certain facilities which would make it possible to realize further economies. Thus the expense to the State would be substantially reduced.

A further advantage of this proposed alternative is that the "integrity" of the trade, industrial, and technical education programs of the Salt Lake Trade Technical Institute would be maintained. Though there is concern for the continued offering of trade, industrial, and technical education courses in a "college" setting, this alternative would maintain Salt Lake Trade Technical Institute as presently constituted, and would not affect the nature of control, administrative organization, or the training programs currently offered by the trade technical institute.

There are, however, disadvantages to this alternative.

Though substantially less expensive to the State than the first alternative, it must be recognized that establishing two separate institutions, even though located on one campus, is more expensive than the establishment of a single institution. Table XXIX, A Comparison of the Costs of Site Acquisition and Construction of the Three Alternatives, indicates the estimated cost of the present proposal to be approximately $20,000,000 whereas the estimated cost of a single institution (Alternative #3) would be approximately $16,500,000. Can the establishment of two institutions be justified where a single comprehensive institution, which fulfills the "accepted purposes" of the junior college and includes courses of study offered by Salt Lake Trade Technical Institute, accomplishes the same objectives?

Aside from financial considerations, there are certain disadvantages which are inherent in this alternative. It has been noted that the two institutions would have separate administrative organizations, though the institutions would occupy the same campus. The administrative problems which would result under this alternative would be difficult indeed to overcome. Responsibility for the administration of the campus would be "divided" between two administrative organizations, and from an administrative point of view, "divided responsibility" inevitably leads to inefficiency, duplication, increased costs, unnecessary competition, and public confusion -- an item of considerable importance.

Among the problems arising under divided administrative responsibility, as proposed in this alternative, are the following:

(1) Utilization of facilities. Each institution would control its own facilities, scheduling classes as appropriate and consistent with the educational programs of the institution. But problems will invariably arise over the use of those facilities shared by the two institutions. When conflicts or disagreements arise, what procedure for settlement or decision will there be? Which of the two institutions is to assume responsibility for the scheduling, maintenance and operation of shared facilities? Such an arrangement will create more problems than it solves.

(2) Personnel problems. Each institution would be expected to provide its own staff and faculty, but problems will arise over the employment, payment, and supervision of persons whose assignment is in facilities which are shared. Persons involved here would include custodians, grounds and maintenance personnel, librarians, student union employees,

and physical education personnel. Who, in the final analysis, would assume responsibility for such personnel? Who would make recommendations for the employment of personnel in shared facilities? Who would establish policies and procedures governing such personnel? Could two separate administrative organizations agree on personnel qualifications, assignment, policies, and procedures? This is an area of serious concern.

(3) Curriculum development. The problems arising with respect to the curriculum stem from the fact that there is no clear distinction, in some curricular areas, between offerings of a trade technical institute and those of a comprehensive junior college. With the proposed junior college and Salt Lake Trade Technical Institute established as separate institutions, which institution would assume responsibility for the development of the curriculum in those areas involving technical and academic subjects? For example, differences of opinion will arise over which institution should offer the following courses:

> Medical, dental, optical, and x-ray technician; medical and dental assistant; police science and law enforcement; fire training; agri-business; landscape design; advertising; data processing; secretarial science; hotel and restaurant management; and various other semi-professional and technology courses.

Such courses as listed above require the kind of training and education offered by the two institutions proposed under this alternative. Cooperation would solve certain of the problems, but many other problems, such as those arising from the fact that trade technical courses do not carry credit, the employment and assignment of faculty personnel, curricular requirements, scheduling of classes and facilities, and other problems serve to create a difficult situation which would adversely affect the curricular offerings in the areas indicated above.

(4) Uniform staff and faculty policies. As noted above, each of the institutions under this alternative would provide its own staff and faculty. Problems arising under separate personnel policies would include such items as employment practices, qualifications of staff and faculty, uniform salaries for staff and faculty, teaching load, teaching assignments, dismissal procedures, and other matters which would affect the staff and faculty of both institutions. Each institution would see their personnel needs in a different light, would look for different qualifications, and make assignments based on different criteria. The effective administration of personnel depends on consistent practices and equal treatment.

(5) Administrative organizations. Two separate institutions would require separate administrative organizations. The result would be two administrations similar in composi-

tion, performing similar (and sometimes identical) functions, and duplicating effort. In addition, there would be parallel organizations in counseling, admissions, and student personnel performing similar functions and services and having the same objectives, yet separate because the two institutions are separate. The duplication of effort and function is obvious and can only lead to inefficiency, ineffectiveness, and confusion.

(6) Student personnel policies. Separate administrative organizations will establish different policies as they relate to students. For example, what will the admissions policies of the two institutions be? What kind of a placement testing program will be established? Will policies regarding attendance, discipline, and scholastic achievement be the same, or will they differ? Separate administrative organizations will see students in a different light and will want to treat students in different ways. Policies relating to student personnel must be consistent to be effective. Differences in student personnel policies will adversely affect the relationships between the two institutions.

(7) Remedial instruction. A major function of the comprehensive junior college is that provision be made for remedial instruction, i.e., reading, writing, arithmetic, and speech. Under the alternative proposed would the junior

college assume this responsibility or would it be shared by both institutions? Duplication of effort will result if this responsibility is not clearly assigned. Should this responsibility be assigned to the junior college will such an arrangement be acceptable to the trade technical institute? Will trade technical students be encouraged to enroll in such courses?

(8) Enrollment. How will the establishment of separate institutions on the same campus affect the enrollments of the institutions? The answer to the question is to be found in the occupational goals of students entering college and the attitude of students toward trade, industrial, and technical education. Information presented in Chapter V of this study clearly indicates student preference for professional and managerial occupations. Preparation for these occupations normally requires four-years of study in the university. Though these goals may be unrealistic for a majority of the students, they are nonetheless the primary choice of the student. The pressures of family, friends, society, and the status and prestige of such goals lead students to such decisions.

Another factor which will affect the enrollment of the two institutions is the attitude of students toward trade, industrial, and technical courses of study. The attitudes of students are directly related to the attitudes of society. In general, students do not equate trade, industrial, and technical courses with those that are academic in nature. Courses offered by a trade technical institute are not as "acceptable" as courses in academic areas, for they lack prestige and status. Although such attitudes are regrettable, they are not easily dispelled; and the "separation" of Salt Lake Trade Technical Institute from the proposed junior college will only confirm the beliefs of students concerning trade, industrial, and technical education. The separation of the two institutions will adversely affect the enrollment of Salt Lake Trade Technical Institute. Though students may not possess the required abilities to succeed in academic courses, faced with the choice of attending a "college" or a trade technical institute, students will favor the college in pursuing education beyond the high school.

(9) The transfer of students between institutions. It is to be anticipated that students enrolled in the two institutions will want to transfer to the other institution. The transfer of students from one institution to the other will present some problems, i.e., transfer during the regular school year, transfer or loss of credit for courses, and acceptance of courses completed, but administrative arrangements between the two institutions should be such as to facilitate the trans-

fer of students between the separated institutions.

The transfer of students between the institutions presents a problem of deeper concern. The problem is related to the "attitudes" of students toward trade, industrial, and technical education, as discussed earlier; and involves the educational programs offered by the two institutions, which could affect enrollments. The attitude of students toward trade, industrial, and technical education, as noted heretofore leads students to select a "college" in preference to a trade technical institute. This same attitude will, in all probability, affect the decision of trade technical students to transfer to the junior college. Further than this, the trade technical student will see in the junior college an opportunity to enroll in "prestige" courses in a larger institution, an opportunity to work for an associate degree, participate in a program of intercollegiate athletics, prepare for a four-year institution, and attend an institution of recognized standing in the community. The overall effect will adversely affect the enrollment of the trade technical institute.

Few students enrolled in the proposed junior college will understand or recognize the advantages of enrolling in trade, industrial, and technical education courses. The separation of the two institutions will result in "inherently unequal" educational programs, opportunities, and will further reinforce the attitudes of students as to the "acceptability" of trade, industrial, and technical education.

ALTERNATIVE #3:

THAT THE PROPOSED JUNIOR COLLEGE AND SALT LAKE TRADE TECHNICAL INSTITUTE BE COMBINED AND THAT A SINGLE COMPREHENSIVE INSTITUTION BE ESTABLISHED.

This alternative provides for the establishment of a comprehensive junior college offering occupational, transfer, general and adult education. The institution would also provide guidance services, remedial instruction, and a wide range of community services. Under this alternative there would be one administrative organization responsible for the development of an institution embracing the "accepted purposes" as outlined in Chapter I of this study. The administration of the institution would be responsible to a designated state agency.

Under this alternative the program of education and training, presently offered by Salt Lake Trade Technical Institute, would become an integral part of the program of the proposed junior college. The trade, industrial, and technical education programs, together with various other occupational programs, would constitute a significant and important part of the curricular offerings of the junior college. Without such a program of occupational training the junior college would serve only the transfer function, that of preparing students for entry into the university. The junior college cannot effectively perform its functions without broad offerings in the occupational area.

Reference to Table XXIX, A Comparison of the Costs of Site Acquisition and Construction, indicates the approximate cost of this alternative to be $16,500,000. Predictions of enrollments (Chapter VII) and estimated costs for capital outlay (Chapter VIII) indicate that a single institution, as proposed here, could adequately serve the number of students anticipated and that while the cost of construction would be in excess of that required for the development of the proposed new campus of the Salt Lake Trade Technical Institute, it would provide opportunties for twice as many students. From the standpoint of costs to the State, this alternative is the most economical of the three alternatives proposed.

Yet there is opposition to this alternative. There is resistance to the proposal to include trade, industrial, and technical education courses, as presently offered at Salt Lake Trade Technical Institute, in the program of the junior college. The concern here is for the "integrity" and continued offering of trade, industrial, and technical education courses in a "college" setting. The belief is that in a collegiate setting, which is essentially academic, little recognition or acceptance would be accorded trade, industrial, and technical education courses and that an inevitable result is a de-emphasis, if not the outright elimination, of such courses from the curriculum. Such an objection has more validity in a four-year institution, where the status and prestige of the institution is based on the nature and quality of the academic program. The same is not true of the junior college. The junior college is unique in its objectives, functions, curriculum, and student body, and is different from other institutions in higher education. Most important is the fact that the junior college is not bound by the traditions of the four-year institutions. The "accepted purposes" of the junior college clearly indicate the breadth of curricular offerings, and courses in trade, industrial, and technical education form a significant, if not a substantial, part of the junior college program. The junior college makes its most important contribution in the preparation and training which it provides for entry into a wide range of occupations.

An appropriate question at this point is: "Can the proposed junior college, offering a program of studies which would include transfer, general, occupational, and adult education courses, maintain the present status and integrity of trade, industrial, and technical education courses as presently offered at Salt Lake Trade Technical Institute?" The answer to the question is an unqualified "yes." The following statements are offered in support of the answer indicated:

(1) The junior college offers trade, industrial, and technical education courses, "without reference to baccalaureate credit," which are designed to provide the education and training necessary for employment. This is a primary objective. All courses offered in a junior college may carry credit toward a two-year associate degree, but only if this is the objective of the student. Credit in trade, industrial, and technical education courses is not a condition for enrollment in such courses. Thus, the junior college effectively meets national standards in trade, industrial, and technical education.

(2) The objectives of trade, industrial, and technical education are achieved by the junior college. Providing students with a salable skill and thus the means of making a livelihood can be achieved in the junior college. Courses in general education as offered by the junior college, meet other objectives of trade, industrial, and technical education.

(3) An essential characteristic of the junior college curriculum is its "flexibility" in meeting the needs of the community and students. As such, the curriculum is subject

to change. In the area of occupational education junior colleges are prepared to offer short and long term courses, with or without credit, and beginning anytime during the course of the school year, whenever the need arises.

(4) There is significant support for the program of the junior college from labor, business, government, and industry. The AFL-CIO has "adopted the strongest statement in support of community colleges that organized labor ever made" and George Meany, President of the AFL-CIO, in commenting on the fact that "young people need high levels of technical skills to hold jobs" pointed out that "there are a great many reasons why we in the organized labor movement feel that community colleges have a key part to play in this effort."[40]

Mr. Edwin P. Neilan, President of the U. S. Chamber of Commerce, in discussing the advantages of the junior college points out that "the community college has an increasing role to play in the nation's future educational plans" and that "since the community college offers an opportunity for training a substantial portion of this needed manpower it holds the key to economic growth . . ."[41]

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[40] George Meany, "Labor and the Community College," Junior College Journal, XXXVII (February, 1964), pp. 6-8.

[41] Edwin P. Neilan, "The Changing Educational Scene," Junior College Journal, XXXIV (October, 1963), pp. 4-8.

The list of those who support the community junior college is impressive, and includes representatives from all sectors of the economic, social, and political life of the nation. This support grows out of the favorable experience which business, labor, industry, and government have had with the junior college.

(5) The junior college administrator, responsible for occupational training, devotes his time to the organization and development of trade, industrial, and technical education courses based on the needs of business, industry, and government in the community as ascertained through community surveys.

(6) The junior college is able to maintain the "integrity" of trade, industrial and techncial education courses. Appropriate standards and requirements are maintained in all phases of the curriculum, and trade, industrial, and technical education courses are not diluted nor are they converted to other types of programs.

(7) As noted elsewhere, the junior college effectively meets the needs of business, industry, and government through various occupational training programs. Further recognition of this fact is found in those states where legislation provides for merging trade technical institutes with junior college programs. This development has occured in New York,

New Hampshire, North Carolina, Hawaii, and in a number of locally-controlled two-year institutions across the nation.

(8) The state must recognize that not all students have the ability nor the desire to pursue education at the university level. Because of its broad and varied curriculum, the junior college is better prepared to provide educational and training programs at the post-high school level. Both the university and trade technical institute are specialized institutions with limited educational programs and thus do not serve the broad range of student needs.

(9) The junior college enhances the prestige and dignity of trade, industrial, and technical education courses, more so than the trade technical institute. Dignity and prestige of trade, industrial, and technical education courses depends on several factors: the attractiveness of the physical plant, the qualifications and training of the faculty, the quality of teaching, the granting of an associate degree, and the fact that such courses are offered in a "college." In the public's view, this last factor weighs heavily in favor of the junior college.

(10) Trade, industrial, and technical education courses offered in the junior college receive support from federal programs. In addition, because they are accredited, junior colleges are eligible for financial assistance under certain

federal programs which exclude unaccredited institutions from participation.

In brief, the junior college can do anything that a trade technical institute can do, and it can do much more in meeting the needs of students and to provide new and increased educational opportunities. The junior college can offer any course offered in a trade technical institute, qualify for federal assistance for vocational education and training, maintain national standards and fulfill the objectives of trade, industrial, and technical education, while serving the economic and social interests of the community.

It must be pointed out here that the real responsibility for maintaining "the present status and integrity of trade, industrial, and technical education as presently offered at Salt Lake Trade Technical Institute" lies with the designated state agency or board exercising immediate control and jurisdiction over the proposed junior college.

The agency exercising control and jurisdiction over the junior college must fully understand the "accepted purposes" and functions of the junior college, and provide the needed direction and guidance if the junior college is to discharge its responsibilities effectively. Thus, if the agency controlling the junior college recognizes, as it must, the importance of occupational training in the over-all junior college program, there should be little cause for concern over the future of trade, industrial and technical offerings in the junior college.

In addition, the agency which exercises jurisdiction over the junior college is responsible for the employment of the chief administrator of the junior college. The success of the junior college in achieving the stated purposes depends in large part on this individual. The governing agency must satisfy itself that the chief administrator understands and accepts the junior college concept. The chief administrator should present a "balance" in his education and training, and must understand the significance of trade, industrial and technical education, as well as academic education. Such an administrator would develop all aspects of the junior college program and would neglect none.

A third factor of importance is the orientation of the junior college counseling staff. The chief administrator of the junior college must satisfy himself that the counseling staff is "balanced," for the comprehensive junior college cannot effectively attain its goals if the counseling staff is either too strongly academically or vocationally oriented. A continuing program of in-service training for the counseling staff is essential if students are to be counseled effectively regarding all occupations, including professional, semi-professional, technical, services, clerical, sales, and skilled. It might be added here that the faculty of the junior college must also understand the junior college concept. Here again, the chief administrator is the responsible person for in-service training for all staff and faculty.

Any plan for post-high school education should contribute to the status and prestige of trade, industrial, and technical education. The significant advantage of the junior college in this respect is that it offers the best opportunity to promote trade, industrial, and technical education courses and thus enhance the status and prestige of courses in this area. The President's Panel of Consultants on Vocational Education points out that by:

> "offering certain type of credentials for graduates, such as the associate in arts degree, helps in raising the prestige of the school. Mature persons like to be associated with an institution that ranks high in the eyes of the community and the State, and recruitment of students is facilitated by high prestige."[42]

Thus the status and prestige of trade, industrial, and technical education is enhanced when offered in a "college" setting. That institution which is designated as a "college" has a certain built-in advantage, while the same advantages do not accrue to the trade technical institute.

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[42] Education for a Changing World of Work: Report of the Panel of Consultants on Vocational Education, OE-50030 (Washington, D.C.: Government Printing Office, 1963), p. 149.

Improving the status of trade, industrial, and technical education, which can be effected in the junior college, will result in greater "acceptance" of such courses by students and in increased enrollments. The reason for the growth in enrollment in trade, industrial, and technical education courses is that students who initially enroll in academic programs and who subsequently find the rigors of such a program too difficult, can change to an occupational course of study without loss of time, credit, and without embarrassment. This is possible since all courses, academic and occupational, are offered in one institution. Thus, students can change educational programs in the junior college without difficulty, changing from academic to occupational or from occupational to academic. At the four-year institution, the student who fails to succeed academically is left with but one alternative -- to withdraw, for the demands of the university are essentially the same in all curricula. In a similar way, the trade technical student, capable of a four-year education, should not be penalized should he change his mind and decide on a university education.

The junior college is an accredited institution and as such enjoys the recognition of other institutions which are also accredited. Through such recognition the value of credits, the content of courses, and the standards of one institution are accepted in full by another institution. Such accreditation would enable the student enrolled in trade technical courses to transfer to another institution, offering comparable courses, without loss of credit or courses. Brigham Young University, Weber State College, and Utah State University offer courses of study in occupational areas to which a junior college student could transfer. The same is true for students enrolled in courses in academic fields. However, work completed in an unaccredited trade technical institute would not be accepted for transfer by the four-year institution.[43] Thus, capable students in trade technical courses would not be permitted the opportunity to change occupational goals and thus pursue education at the university level, without undue loss of credits or time.

Junior colleges provide cultural and general educational opportunities, elements of significant importance in preparation for employment. Various studies among business and industrial concerns have revealed that employees more frequently lose positions because of a lack of general education than because of a deficiency in technical skills. Many trade technical institutes do not have the academic resources to give students the related knowledge and general education background required in present day employment. The junior college has a distinct advantage over the trade technical institute since general education is an established "purpose" in the junior college program.

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[43] Under certain circumstances, courses completed in an unaccredited trade technical institute can be validated by special examination and university credit, not to exceed that which can be earned in one quarter or one semester.

An essential aspect of the junior college is its orientation to the needs of the community. The junior college serves more than the high school graduate -- it serves the adult population as well. In addition to responding to the needs of high school graduates and the adult population, the junior college is responsive to the needs of business, industry, and government and serves to support the economic life of the community. The broad curricular offerings of the junior college provide greater educational opportunities for more people.

Comparison of Operating Costs

Only conjecture can be made concerning differences in probable operating expense of the three alternatives. It should be noted that the per student (F.T.E.) expenditures in Salt Lake Trade Technical Institute for educational and general purposes has approximated $600 per year in recent years. With the most recent appropriation for Salt Lake Trade Technical Institute, the per student costs will increase to 700 or 750 dollars per year. Undoubtedly, when the Trade

Technical Institute moves to its new campus with considerable more space, maintenance costs will rise markedly. On the other hand, larger enrollments will tend to reduce the unit costs. It is difficult to ascertain what change in operating costs will occur, except that expansion will probably result in increased costs.

Typically, the per student costs in a sizable junior college might be expected to approximate from $600 to $800 per year. The best comparison of such an institution in Utah is Weber Junior College during its last years of operation before the development of upper division programs. During these years, operational costs ranged between 600 to 650 dollars per student for educational and general expenses.

The local evidence of costs at Salt Lake Trade Technical Institute and Weber Junior College -- if one accepts these costs as indicative of the future -- would suggest that per student costs at either Trade Technical Institute or a comprehensive junior college would be between 600 and 800 dollars annually. It might be expected that a fully developed technical institute would be more expensive than the junior college because trade-technical programs -- characterized by limited class size, the use of expensive equipment, and longer clock hours of instruction -- usually have higher unit costs per student than that which is found in liberal arts instruction.

A major difference between the costs of the three proposed alternatives, however, must be anticipated in the area of maintenance. Obviously it is more expensive to support and operate two campuses than a single one, for there would be some duplication in utilities, janitorial staffs, buildings, etc.

Rough calculations indicate that the maintenance cost of the planned Trade Technical Institute campus in 1973, exclusive of dormitories or grounds upkeep, would be about a third of a million dollars annually. These maintenance costs include utilities, insurance, janitorial services, supplies, repairs, security services and other expenditures for campus buildings. A separate junior college may cost up to double this amount to maintain, as its plant would be considerably larger; so that maintenance costs of the two campuses as proposed in Alternative #1, would probably reach an annual total of $800,000 or more. Consolidating these two institutions on a single campus (Alternative #2 and #3) could conceivably save each year up to $30 per student for maintenance costs alone.

Another difference in operating costs might be found in the different staffing patterns required for the three alternatives. Maintaining two complete campuses, as in Alternative

#1, would require two separate and complete sets of administrative officers, such as two presidents, two business managers, two librarians, two deans of students, two sets of instructional officers, etc. In Alternative #2, some of these duplicative positions would be eliminated. Alternative #3 offers the greatest opportunity for consolidation of positions and maximum utilization of staff. Again, the complexities of the problem obscure sharp delineation of cost differences in these three plans.

SUMMARY

The recommendation of this study, that a junior college be established in the Salt Lake Metropolitan Area, presents the question as to the best method of implementing the recommendation. Three alternatives are proposed as a means of effecting the establishment of the proposed junior college.

The proposed alternatives are as follows:

(1) That the proposed junior college be established as a separate institution, and independent of other educational institutions in the Salt Lake Metropolitan Area.

This proposal would fully implement the recommendations of this study. Though such a course of action would be desirable, the cost to the State would be considerable, in view of the fact that plans for the construction of Salt Lake Trade Technical Institute are under way at the present time.

This alternative would increase the demand for State monies since two institutions would have to be financed.

(2) That the proposed junior college and Salt Lake Trade Technical Institute be established as separate institutions located on the same campus. This proposal also provides for the sharing of certain facilities.

This proposal would establish two institutions on the same campus but administered separately. This alternative would reduce the expense to the State, and yet it is more expensive than the third alternative, which will be described later.

An advantage of this alternative is that through the separation of the two institutions, the "integrity" of trade, industrial, and technical education courses would be maintained, since the trade technical institute will be separated, in all respects, from the junior college.

The disadvantage of this alternative is to be found in the "separation" of the two institutions. The administrative, curricular, and financial problems which will arise from the sharing of facilities will defy solution. The effect of such an arrangement will work to the disadvantage of the trade technical institute from the standpoint of enrollment and the status and prestige of trade, industrial, and technical education.

(3) That the proposed junior college and Salt Lake Trade Technical Institute be combined and that a single comprehensive institution be established.

The immediate advantage of this proposal is the economy to the State. The cost of this proposal as compared to the other alternatives is substantially less, as indicated in Table XXIX, A Comparison of the Costs of Site Acquisition and Construction of the Three Alternatives and in the discussion of operating costs.

This alternative would establish an institution which would fulfill the stated purposes of the junior college and at the same time maintain the "integrity" and improve the status and prestige of trade, industrial and technical education courses. Thus the establishment of the proposed junior college, as provided in this alternative, offers the State the most economical way to discharge its educational obligations in the Salt Lake Metropolitan Area, while at the same time expanding educational opportunities over those that presently exist. Further, the alternative is educationally sound, administratively effective, and would provide an educational program of significant value and worth to students.

This proposal is recommended to the State in providing for the post-high school education of high school graduates in the Salt Lake Metropolitan Area.

TABLE XXIX
A COMPARISON OF THE ESTIMATED COSTS OF SITE ACQUISITION AND CONSTRUCTION OF THE THREE ALTERNATIVES

ALTERNATIVES	CAMPUS SITE		CONSTRUCTION		TOTALS	
	Low	High	Low	High	Low	High
Alternative #1						
Proposed junior college established as a separate institution (4000)	$500,000	$1,000,000[2]	$10,000,000	$12,000,000[3]	$10,500,000	$13,000,000
Planned development of Salt Lake Trade Technical Institute (2225)	$235,000[1]		$10,383,649		$10,618,649	
TOTALS:	$735,000	$1,235,000	$20,453,869	$22,453,869	$21,118,649	$23,618,649
Alternative #2						
Proposed junior college (4000) and S.L. Trade Technical Institute (2225) established as separate institutions located on one campus, sharing certain facilities.	$ 90,000[5]	JC:	$ 8,500,000	$11,000,000[4]	$ 8,590,000	$11,090,000
	$235,000	SLTTI:	$10,383,649		$10,618,649	
TOTALS:	$325,000		$18,883,649	$21,383,649	$19,208,649	$21,708,649
Alternative #3						
Proposed junior college and S.L. Trade Technical Institute, combined on one campus as a comprehensive institution. (6225)	$ 90,000[5]					
	$235,000		$16,500,000		$16,825,000	
TOTALS:	$325,000					

[1] Indicates 78 acre site presently owned by S.L. Trade Technical Institute on Redwood Road. This site is for the future development of the proposed S.L. Trade Technical Institute.

[2] Actual cost for a second campus would depend on the location of the site.

[3] The proposed junior college as a comprehensive institution.

[4] Certain facilities to be used jointly by both institutions.

[5] Purchase of additional land adjoining Redwood Road site.

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CHAPTER X

CONCLUSIONS AND RECOMMENDATIONS

A FINAL WORD

The growth and development of community junior colleges across the nation has been the most dramatic event in American higher education since the turn of the century. Today there are over 725 public and private two-year colleges enrolling more than one million students. Over 400 of these two-year institutions are public community colleges which enroll 85 to 90 per cent of all junior college students.

The impressive growth of the public junior college has been due to various factors, the most significant of which are the following:

1. Relieve colleges and universities of the burden of substantial increases in freshman enrollment.
2. The demands of communities and individuals for greater variety in curricular offerings.
3. An opportunity to extend educational opportunities beyond the high school at comparatively low cost.
4. Provide greater employment opportunities for high school graduates.
5. Demand for educational opportunities by an increasing number of adults in the community.

As communities have recognized new social and technological demands, junior colleges have been established in answer to such demands. Many states have recognized the importance of the junior college as an integral part of a system of higher education, and have provided for a statewide junior college system. Among the states are: California, Oregon, Washington, New York, Florida, Texas, North Carolina, Illinois, Alabama, Michigan, Minnesota, and Arizona.

The study of the need for a junior college in the Salt Lake Metropolitan Area, conducted under the auspices of the Utah Coordinating Council of Higher Education, examined a number of factors bearing directly on the need for additional post-high school educational facilities in the Salt Lake area. Among the factors considered were population growth, school enrollments, educational and occupational opportunities in the Salt Lake area, predicted junior college enrollments, and certain financial considerations.

The significant facts concerning population growth were as follows:

1. Population of the Salt Lake Metropolitan Area (SLMA) will increase 40 per cent (167,000) between 1960 and 1970 and will double by 1980 to 821,000.

2. One-half of all people in Utah will live in SLMA by 1970.

3. Presently, one-half of Utah's population is served by the University of Utah and Salt Lake Trade Technical Institute, while the other one-half are served by no less than seven institutions.

A study of school enrollments and related factors was included in order to ascertain the expected student demand for higher education in the Salt Lake area. The increases in the general population are reflected in increases at all levels of education. The significant facts relating to school enrollments are as follows:

1. Total school enrollment in SLMA will increase 45 per cent between 1960 and 1970 and will more than double by 1980.

2. The college age group (18-21 years) will increase by 80 per cent between 1960 and 1970.

3. The number of high school graduates in the SLMA will double between 1960 and 1970, and the number continuing on to higher education will increase nearly two and one-half times. The cumulative effect of increasing population and the college-going trend will place a heavy burden on higher education facilities in the SLMA.

4. 86.2 per cent of all freshmen at the University of Utah live in SLMA.

5. Total enrollment at the University of Utah will double between 1960 and 1970, and freshman enrollments will increase 108 per cent by 1970 and will triple by 1975.

It should be clear that the cumulative effect of substantial increases in the general population, which are reflected in increasing enrollments, and the increase in the college-going trend make clear that there will be increased demands by high school graduates for post-high school educational opportunities.

The study evaluated the post-high school educational opportunities available to high school graduates in the Salt Lake area. Factors which were evaluated were the admission requirements, tuition charges, and curricular offerings. Admission requirements of the six post-high school institutions in the Salt Lake area are "liberal," and range from the "open door" policy to requirements which are somewhat selective. Though selective, the University of Utah and Westminster College admissions policies do not operate to deny admission to substantial numbers of students. On the other hand, tuition charges may be a greater deterrent to a post-high school education than admission requirements. Tuition charges at the public institutions are somewhat under those of the private institutions, which undoubtedly explains, in part, the substantial enrollments of the public institutions. The significant factor in this instance relates to the curricular offerings of the University of Utah and Salt Lake Trade Technical Institute as follows:

1. Curricular offerings in the two public institutions in the SLMA are limited to preparation for professional occupations (University of Utah) and limited trade and technical occupations (Salt Lake Trade Technical Institute).
2. There are no opportunities for occupational training for over 600 occupations (30,000 additional jobs by 1970, over one-half of all new jobs in Utah) in the semi-professional, managerial, clerical, sales, and service areas in SLMA.

In short, high school graduates are limited in their selection of occupational training to professional occupations or trade and technical occupations. The best occupational opportunities in Utah are to be found in the semi-professional, managerial, sales, clerical, and service occupations, yet opportunities to train for such occupations are not generally available in the Salt Lake area. Thus, the limited educational opportunities in the Salt Lake area operate to limit the opportunities of high school graduates to train and prepare for a number of occupations.

It should also be pointed out that the average age of the student enrolled at Salt Lake Trade Technical Institute is twenty-three, whereas the average age in junior colleges and the lower-division of four-year institutions is eighteen or nineteen years. This suggests a further limitation of the educational opportunities available in the Salt Lake area. It would appear that the University of Utah is the only public post-high school institution in the Salt Lake area which provides educational opportunities for the high school graduate. The opportunities at the University of Utah are limited, for the most part, to preparation for professional occupations. The question which this raises is: What opportunities are there for high school graduates who do not want to attend the university?

A further consideration concerns the adult members of the community. The 1960 U. S. Census included the following information concerning the educational attainments of Salt Lake area adults over 25 years of age: (1) 1,369 adults with no formal schooling; (2) 38,905 adults with an education ranging from the first to the eighth grade; and (3) 96,905 adults with from one to four years of high school. It is well to ask what educational opportunities are available to such persons in the Salt Lake area.

An essential aspect of the junior college study was an evaluation of the occupational opportunities in the Salt Lake area. A fact of paramount importance to high school graduates is that the principal employers in the Salt Lake area, are, more and more, insisting on two and at least one year of post-high school education and training prior to employment. Thus, high school graduates expecting to enter the labor market will find that education and experience beyond the high school a prerequisite in gaining employment.

Significant facts relating to the occupational opportunities in the Salt Lake area are as follows:

1. There will be approximately 57,000 new jobs (not including professional occupations) for women in the SLMA by 1970, yet training for women in the SLMA is limited to only three positions of employment: cosmetology, practical nursing, and business practices.

2. One in every three adults in the SLMA are potential students for a post-high school institution, yet

curricular offerings at the University of Utah and Salt Lake Trade Technical Institute are too limited and narrow in scope.

3. The best employment opportunities in the SLMA are to be found in the semi-professional, services, sales, and managerial occupations, yet there is little or no opportunity to train for such positions.

Predictions concerning the anticipated enrollment in the proposed junior college were determined by the application of various methods. If conservative estimates are used, the proposed junior college could expect an enrollment of approximately 2,000 students in the first year of operation. Subsequent to the first year, predictions indicate an enrollment of from 4,200 to as many as 6,000 students. Thus after the second year of operation, the proposed junior college would enroll two to three times the number of students (2,225) expected to enroll in Salt Lake Trade Technical Institute by 1971. In view of the increased demands for post-high school education, the proposed junior college would accommodate a greater number of students than the proposed expansion of Salt Lake Trade Technical Institute.

Information relating to the cost of educating junior college students and expenditures for capital outlay was included in the study. The information reported in the study, and based on the experiences of other states, suggests that it is less expensive to educate a student in a junior college than in the lower-division of a university.The experiences of other states indicate that it is less expensive, on a per student basis, to construct a junior college than to build a four-year institution. It was reported that the proposed construction of Salt Lake Trade Technical Institute will ultimately cost $10,689,469. The per student cost, based on 2,225 students, will be approximately $4,800. The proposed junior college will cost approximately $16,500,000 and enroll 6,000 students at a per student cost of $2,750.

The study considered various campus locations for the proposed junior college. It is recommended that the site at 4600 South and Redwood Road be utilized as the campus for the proposed junior college. This site is owned by the Utah State Department of Public Instruction and is to be utilized as the campus for Salt Lake Trade Technical Institute. It is further recommended that the proposed junior college be consolidated with Salt Lake Trade Technical Institute on the Redwood Road site.

A comprehensive junior college in the Salt Lake Metropolitan Area will:

1. Expand post-high school educational opportunities.
2. Offer a broad and varied curriculum that more adequately meets the needs of the community and students.

3. Expand occupational offerings, and thus educational opportunities, to include semi-professional, technical, managerial, services, secretarial, clerical, and sales occupations.

4. Offer university-parallel courses.

5. Offer courses in general education and civic competence.

6. Meet the demands of adults for further education.

7. Provide community services and cultural events.

8. Provide low cost, quality education.

9. Provide the state with an economical way to discharge its educational responsibilities.

10. Relieve the university of its "remedial" functions.

11. Enable students with educational deficiencies to qualify for university admission.

12. Provide effective occupational and academic guidance.

13. Provide training in a wide range of occupations and thus enable students to qualify for immediate employment.

RECOMMENDATIONS

IT IS RECOMMENDED THAT:

1. THE NEXT UTAH LEGISLATURE AUTHORIZE THE ESTABLISHMENT OF A COMPREHENSIVE TWO-YEAR JUNIOR COLLEGE IN THE SALT LAKE METROPOLITAN AREA AND APPROVE THE FOLLOWING EDUCATIONAL PROGRAMS:

   A. OCCUPATIONAL TRAINING
   B. TRANSFER EDUCATION
   C. GENERAL EDUCATION
   D. ADULT EDUCATION
   E. GUIDANCE SERVICES

2. THE PROPOSED JUNIOR COLLEGE BE CONSOLIDATED WITH THE SALT LAKE TRADE TECHNICAL INSTITUTE ON ONE CAMPUS.

3. THE CONTROL AND DEVELOPMENT OF THE PROPOSED JUNIOR COLLEGE BE VESTED IN A STATE-LEVEL EDUCATIONAL AGENCY OR BOARD.

4. THE NEXT SESSION OF THE UTAH LEGISLATURE APPROPRIATE $150,000 FOR THE EMPLOYMENT OF AN ADMINISTRATIVE STAFF, BY THE DESIGNATED STATE-LEVEL EDUCATIONAL AGENCY OR BOARD, TO UNDERTAKE THE PLANNING AND DEVELOPMENT OF THE PROPOSED JUNIOR COLLEGE.

5. IMMEDIATE STEPS BE TAKEN TO INFORM THE GOVERNOR, THE STATE BUILDING BOARD, AND SUPERINTENDENT OF PUBLIC INSTRUCTION, AND OTHERS OF THE NEED TO INCREASE THE CAPITAL OUTLAY APPROPRIATIONS FOR THE SALT LAKE TRADE TECHNICAL INSTITUTE FOR THE PURPOSE OF CONTINUING CONSTRUCTION ON THE PROPOSED JUNIOR COLLEGE CAMPUS. APPROXIMATELY $3,000,000 SHOULD BE APPROPRIATED. THIS SUM IS IN ADDITION TO THE BUILDING FUNDS NOW PLANNED FOR SALT LAKE TRADE TECHNICAL INSTITUTE.

6. THE CONSTRUCTION OF THE PROPOSED JUNIOR COLLEGE PROCEED AS RAPIDLY AS POSSIBLE AND IN CONJUNCTION WITH THE CONSTRUCTION OF SALT LAKE TRADE TECHNICAL INSTITUTE.

7. THE PROPOSED JUNIOR COLLEGE BE CONSTRUCTED ON THE CAMPUS SITE AT 4600 SOUTH AND REDWOOD ROAD. THE REDWOOD ROAD SITE OF 78 ACRES WILL ULTIMATELY BE TOO SMALL. IT IS THEREFORE RECOMMENDED THAT STEPS BE TAKEN TO ACQUIRE AN ADDITIONAL 40-50 ACRES ADJACENT TO THE EXISTING CAMPUS.

8. THE DESIGNATED STATE-LEVEL EDUCATIONAL AGENCY OR BOARD RESPONSIBLE FOR THE DEVELOPMENT OF THE PROPOSED JUNIOR COLLEGE EXPLORE THE VARIOUS SOURCES OF FUNDS AVAILABLE TO THE STATE OF UTAH FOR CONSTRUCTION AND FOR THE DEVELOPMENT OF EDUCATIONAL PROGRAMS UNDER THE FOLLOWING FEDERAL STATUTES:

   A. HIGHER EDUCATION FACILITIES ACT
   B. VOCATIONAL EDUCATION ACT
   C. FEDERAL HOUSING AND HOME FINANCE AGENCY

9. THE FOLLOWING SCHEDULE OF CONSTRUCTION AND APPROPRIATIONS BE FOLLOWED IN ORDER THAT THE PROPOSED JUNIOR COLLEGE CAMPUS CAN BE COMPLETED AT THE EARLIEST POSSIBLE DATE:

YEAR	PURPOSE	SLTTI REQUEST	JUNIOR COLLEGE	FUNDS REQUIRED
1959	Site acquisition (72 acres)	$ 200,000	--	$ 200,000
1961	Site acquisition (6 acres)	35,000	--	35,000
1961	Construction	179,000	--	179,000
1963	Construction	1,400,730	--	1,400,730
1965	Construction, campus development and site acquisition (40-50 acres)	2,548,579	$3,000,000	5,548,579
1967	Construction	1,850,088	3,000,000	4,850,088
1969	Construction	2,713,162	1,900,000	4,613,162
1971	Construction	1,146,090	--	--
1973	Construction	546,000	--	--
	TOTALS	$10,618,649	$7,900,000	$16,826,559

NOTE: FUNDS FOR CONSTRUCTION AND THE DEVELOPMENT OF EDUCATIONAL PROGRAMS AVAILABLE TO THE STATE OF UTAH THROUGH VARIOUS FEDERAL AGENCIES MAY AFFECT THE AMOUNTS REQUESTED.

APPENDIX

OCCUPATIONS IN NON-AGRICULTURAL INDUSTRIES*

Professional Occupations (129 Occupational titles) This group includes occupations that predominantly require a high degree of mental activity by the worker and are concerned with theoretical or practical aspects of complex fields of human endeavor. Such occupations require for the proper performance of the work either extensive and comprehensive academic study, or experience of such scope and character as to provide an equivalent background, or a combination of such education and experience. School teachers, trained nurses, pharmacists, and engineers are typical occupations in this category.

Semi-Professional Occupations (106 Occupational titles) Included in this group are occupations concerned with the theoretical or practical aspects of fields of endeavor that require rather extensive education or practical experience, or a combination of such education and experience for the proper performance of the work; such fields of endeavor, however, are less demanding with respect to background or the need for initiative or judgment in dealing with complicated work situations than those fields which are considered as "professional." Draftsmen, laboratory technicians, photographers, professional entertainers, aviators, athletic coaches, radio announcers, and commercial artists are occupations representative of this division.

Managerial Occupations (128 Occupational titles) This group includes occupations that are involved primarily with responsible policy-making, planning, supervising, coordinating, or guiding the work-activity of others, usually through intermediate supervisors. Typical of these occupations are managers or presidents of business enterprises, superintendents of construction projects, and purchasing and advertising agents.

Clerical Occupations (180 Occupational titles) This group includes occupations concerned with the preparation, transcribing, transferring, systematizing, or preserving of written communications and records in offices, shops, and other places of work where such functions are performed. Other occupations, such as collectors, telegraph messengers, and mail carriers, although not strictly of this character are included because of their close relationship to these activities. Most of these occupations are performed by mental and manual processes but a few include a part or in whole the operation of such machines as bookkeeping machines and calculating machines

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*Salt Lake-South Davis Occupational Skill Index, Utah Department of Employment Security, Salt Lake City, Utah, September, 1962.

Sales Occupations (70 Occupational titles) Included in this group are occupations concerned with the sale of commodities, investments, real estate, and service, and occupations that are very closely identified with sales transactions even though they do not involve actual participation in such transactions The magnitude of this group is so comprehensive that both the corner newsboy and the salesman of railroad rolling stock are included, but they have in common the contact with prospective customers with the objective of effecting sales transactions.

Personal Service Occupations (75 Occupational titles) Included in this group are occupations concerned with performing services for persons that require predominately either direct contact or close association with the individual. Typical examples are barbers, waiters, bootblacks, and practical nurses A few, however, such as kitchen workers and maids in hotels, may have little or no contact with the recipient of the service.

Other Service Occupations (34 Occupational titles) Domestic, protective, and building service occupations are included in this group. Domestic workers perform duties in private homes; building service workers perform routine cleaning of offices, stores, and shops; and protective service workers are concerned with protecting the county or its political units. buildings, other property, and individuals.

Skilled Occupations (360 Occupational titles) This group includes craft and manual occupations that require predominantly a thorough and comprehensive knowledge of processes involved in the work, the exercise of considerable independent judgment, usually a high degree of manual dexterity, and, in some instances, extensive responsibility for valuable product or equipment. Workers in these occupations usually become qualified by serving apprenticeships or completing extensive training periods.

Semi-Skilled Occupations (365 Occupational titles) Characteristic of this division is the exercise of manipulative ability of a high order, as in the skilled group, but being restricted to a fairly well-defined work routine. These occupations require the performance of part of a craft or skilled occupation, but usually to a more limited extent. Craft helpers, machine tenders, equipment operators and production-line workers are included in this group.

Agricultural and Forestry Occupations (18 Occupational titles) The occupations included in this group are those that are directly associated with various phases of horticultural and animal husbandry activities under covered industries. It also includes occupations concerned with the development and care of forests and the growing and gathering of forest products, but does not include logging occupations.

DEFINITION OF INDUSTRY GROUPS*

Agriculture This division includes forestry, fisheries, related agricultural and horticultural services, animal husbandry, hunting, trapping, fishing, greenhouses, nurseries, hatcheries, seed crop, and other farm activity.

Mining Included in this industrial division are firms engaged in extracting and milling solid minerals including quarrying of asphalt, clay, sand, gravel, building stone, chemical fertilizers from the earth, as well as extracting gaseous and liquid minerals, such as natural gas and crude petroleum. Contract oil- and gas-field service operations closely related to production activities are also included.

Contract Construction This division is made up of general contractors engaged in construction of farm, residential, commercial and industrial buildings, and heavy engineering projects such as highways, bridges, dams, airfields, etc. Also representative of this division are subcontractors in the fields of plumbing, painting, plastering, carpentering, electrical work, masonry, etc.

Manufacturing This industrial group is composed of firms engaged in the mechanical or chemical transformation

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[*] Source: *Standard Industrial Classification Manual - 1957*.

of substances. The assembly of component parts is also included if the finished project is neither a structure or other fixed improvement. Major manufacturing groups are listed as ordnance, food, apparel, lumber, furniture, paper, printing, chemicals, petroleum, rubber, leather, stone, clay, metals (primary and fabricated), equipment, machinery and miscellaneous.

Transportation, Communications, and Utilities This division includes establishments engaged in the following activities: providing passenger and freight transportation by rail, highway, water, or air; providing services related to transportation of petroleum; warehousing and storage; furnishing telephone, telegraph, or commercial TV or radio communication service; and supplying electricity, gas, steam, water or sanitary services.

Wholesale and Retail Trade The wholesale division of this industrial group is composed of all establishments selling merchandise primarily to retailers, to other wholesalers, to institutions, to restaurants and hotels; and to industrial users, including manufacturers, railroads, and governmental agencies. These customers buy commodities from wholesalers for the purpose of resale in one form or another, or for use in the conduct of their business.

The retail trade, in general, includes establishments engaged in selling merchandise for personal or household use, and rendering services incidental to the sale of these goods, includes eating and drinking establishments and filling stations.

Finance, Insurance, and Real Estate This industrial group is represented by firms operating in the fields of finance (banks, security dealers, loan agencies, holding companies, credit institutions and other finance agencies); insurance (carriers, independent agents and brokers); and real estate (sales, firms and brokers, etc.).

Services This division is composed of a heterogeneous group of establishments engaged in rendering business or professional services to individuals and business firms. In this division are medical and health services, all educational institutions, personal and business services, private employment agencies, amusement and recreational services, hotels and other places of lodging. Also included are automobile repair shops, garages, and other miscellaneous repair services.

Government This division includes all federal, state, local, and international government activities. The legislative, judicial and administrative functions, as well as government-owned or operated business enterprises, are identified in the classification structure.